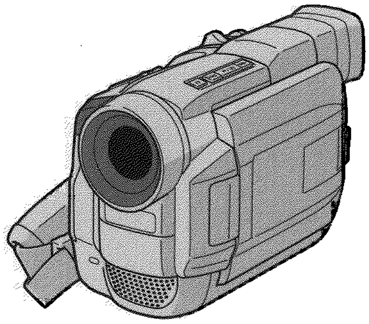
JVC

SERVICE MANUAL

DIGITAL VIDEO CAMERA

GR-DVL100U/300U/305U
/307U/500U/507U



Mini DV NTSC

SPECIFICATIONS *(The specifications shown partain specifically to the model GR-DVL500/DVL300)*

Camcorder

For General

Power supply	: DC 6.3 V ⎓ (Using AC Power Adapter/Charger) DC 7.2 V ⎓ (Using battery pack)
Power consumption	
LCD monitor off, viewfinder on	: Approx. 4.3 W
LCD monitor on, viewfinder off	: Approx. 5.3 W
Video light	: Approx. 3.5 W
Dimensions (W x H x D)	: 80 mm x 96 mm x 159 mm (3-3/16" x 3-13/16" x 6-5/16") (with the LCD monitor closed and the viewfinder pushed down)
Weight	: Approx. 570 g (1.3 lbs)
Operating temperature	: 0°C to 40°C (32°F to 104°F)
Operating humidity	: 35% to 80%
Storage temperature	: –20°C to 50°C (–4°F to 122°F)
Pickup	: 1/4" CCD
Lens	: F 1.8, f = 3.6 mm to 36 mm, 10:1 power zoom lens
Filter diameter	: ø37 mm
LCD monitor	
GR-DVL500	: 3.0" diagonally measured, LCD panel/TFT active matrix system
GR-DVL300	: 2.5" diagonally measured, LCD panel/TFT active matrix system
Viewfinder	
GR-DVL500	: Electronic viewfinder with 0.44" color LCD
GR-DVL300	: Electronic viewfinder with 0.24" black/white LCD
Speaker	: Monaural

For Digital Video Camera

Format	: DV format (SD mode)
Signal format	: NTSC standard
Recording/Playback format	: Video: Digital component recording : Audio: PCM digital recording, 32 kHz 4-channel (12-bit), 48 kHz 2-channel (16-bit)
Cassette	: Mini DV cassette
Tape speed	: SP: 18.8 mm/s LP: 12.5 mm/s
Maximum recording time (using 80 min. cassette)	: SP: 80 min. LP: 120 min.

For Connectors

S	: Y : 1 V (p-p), 75 Ω, analog output C : 0.29 V (p-p), 75 Ω, analog output
AV	
Video output	: 1 V (p-p), 75 Ω, analog
Audio output	: 300 mV (rms), 1 kΩ, analog, stereo
DV	
Input/output	: 4-pin, IEEE 1394 compliant
PC (DIGITAL PHOTO)	
Digital still output	: ø2.5 mm, 3-pole
JLIP/EDIT	: ø3.5 mm, 4-pole

AC Power Adapter/Charger AA-V40U

Power requirement	
U.S.A. and Canada	: AC 120 V∼, 60 Hz
Other countries	: AC 110 V to 240 V∼, 50 Hz/60 Hz
Power consumption	: 23 W
Output	
Charge	: DC 7.2 V ⎓ , 1.2 A
VTR	: DC 6.3 V ⎓ , 1.8 A
Dimensions (W x H x D)	: 68 mm x 38 mm x 110 mm (2-11/16" x 1-1/2" x 4-3/8")
Weight	: Approx. 250 g (0.56 lbs)

Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.

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No. 86551
March 2000

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The following table lists the differing points between Models GR-DVL100U, GR-DVL300U, GR-DVL305U, GR-DVL307U. GR-DVL500U and GR-DVL507U in this series.

	GR-DVL100U	GR-DVL300U	GR-DVL305U	GR-DVL307U	GR-DVL500U	GR-DVL507U
VIEW FINDER	B/W	B/W	COLOR	B/W	COLOR	B/W
LCD MONITOR	2.5"	2.5"	2.5"	3"	3"	3.5"
SIDE LED INDICATOR	NOT USED	NOT USED	NOT USED	USED	NOT USED	USED
CD ROM	NOT USED	USED	NOT USED	NOT USED	USED	USED
PC CONNECTION CABLE	NOT USED	USED	NOT USED	NOT USED	USED	USED

Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded (▨) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistors
   5) Barrier

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

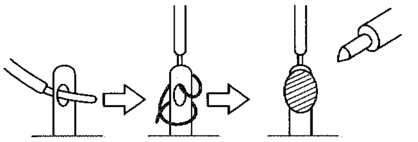


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

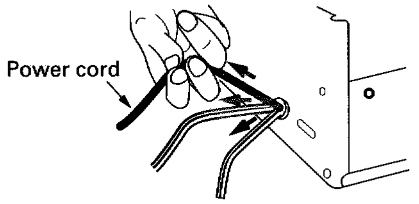


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

    1) **Connector part number** : E03830-001
    2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

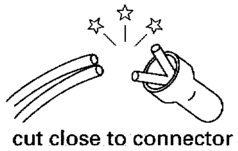


Fig.3

       (2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

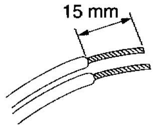


Fig.4

       (3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

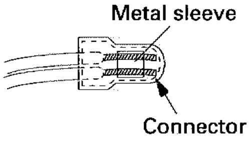


Fig.5

       (4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

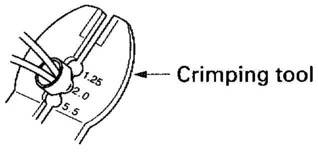


Fig.6

       (5) Check the four points noted in Fig.7.

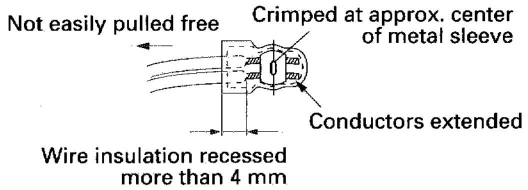

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. **Insulation resistance test**
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. **Dielectric strength test**
Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. **Clearance distance**
When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

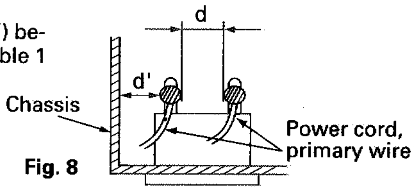


Fig. 8

4. **Leakage current test**
Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
Measuring Method : (Power ON)
Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

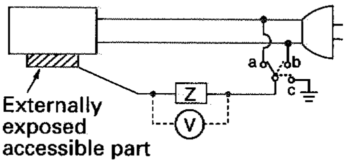


Fig. 9

5. **Grounding (Class I model only)**
Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
Measuring Method:
Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

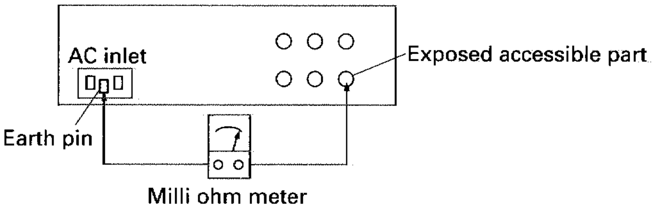


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 miute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	1 MΩ ≦ R ≦ 12 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ/500 V DC	AC 3 kV 1 minute (Class 2) AC 1.5 kV 1 minute (Class 1)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 µF 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

INSTRUCTIONS

(This instraction manual is for the GR-DVL500U/DVL300U)

Dear Customer,
Thank you for purchasing this digital video camera. Before use, please read the safety information and precautions contained in the following pages to ensure safe use of this product.

Using This Instruction Manual
- All major sections and subsections are listed in the Table Of Contents on the cover page.
- Notes appear after most subsections. Be sure to read these as well.
- Basic and advanced features/operation are separated for easier reference.

It is recommended that you . . .
..... refer to the Index (☞ pgs. 59 – 63) and familiarize yourself with button locations, etc. before use.
..... read thoroughly the Safety Precautions and Safety Instructions that follow. They contain extremely important information regarding the safe use of this product.

You are recommended to carefully read the cautions on pages 64 through 66 before use.

SAFETY PRECAUTIONS

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

The AA-V40U AC Power Adapter/Charger should be used with:
AC 120 V∿, 60 Hz in the USA and Canada,
AC 110V – 240 V∿, 50 Hz/60 Hz in other countries.

CAUTION (applies to the AA-V40U)
TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION (s'applique à l'AA-V40U)
POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

NOTES:
- *The rating plate (serial number plate) and safety caution are on the bottom and/or the back of the main unit.*
- *The rating plate (serial number plate) of the AC Power Adapter/Charger is on its bottom.*

This camcorder is designed to be used with NTSC-type color television signals. It cannot be used for playback with a television of a different standard. However, live recording and LCD monitor/viewfinder playback are possible anywhere. Use the BN-V408U/V416U/V428U battery packs and, to recharge them, the provided multi-voltage AC Power Adapter/Charger. (An appropriate conversion adapter may be necessary to accommodate different designs of AC outlets in different countries.)

When the equipment is installed in a cabinet or on a shelf, make sure that is has sufficient space on all sides to allow for ventilation (10 cm (3-15/16") or more on both sides, on top and at the rear).

Do not block the ventilation holes.
(If the ventilation holes are blocked by a newspaper, or cloth etc. the heat may not be able to get out.)

No naked flame sources, such as lighted candles, should be placed on the apparatus.

When discarding batteries, environmental problems must be considered and the local rules or laws governing the disposal of these batteries must be followed strictly.

The apparatus shall not be exposed to dripping or splashing.

Do not use this equipment in a bathroom or places with water.
Also do not place any containers filled with water or liquids (such as cosmetics or medicines, flower vases, potted plants, cups etc.) on top of this unit.
(If water or liquid is allowed to enter this equipment, fire or electric shock may be caused.)

IMPORTANT PRODUCT SAFETY INSTRUCTIONS

Electrical energy can perform many useful functions. But improper use can result in potential electrical shock or fire hazards. This product has been engineered and manufactured to assure your personal safety. In order not to defeat the built-in safeguards, observe the following basic rules for its installation, use and servicing.

ATTENTION:
Follow and obey all warnings and instructions marked on your product and its operating instructions. For your safety, please read all the safety and operating instructions before you operate this product and keep this manual for future reference.

INSTALLATION

1. Grounding or Polarization

(A) Your product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature.
If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

(B) Your product may be equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature.
If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

2. Power Sources

Operate your product only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. If your product is intended to operate from battery power, or other sources, refer to the operating instructions.

3. Overloading

Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

4. Power Cord Protection

Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

5. Ventilation

Slots and openings in the cabinet are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered.
- Do not block the openings by placing the product on a bed, sofa, rug or other similar surface.
- Do not place the product in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

6. Wall or Ceiling Mounting

The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

ANTENNA INSTALLATION INSTRUCTIONS

1. Outdoor Antenna Grounding

If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

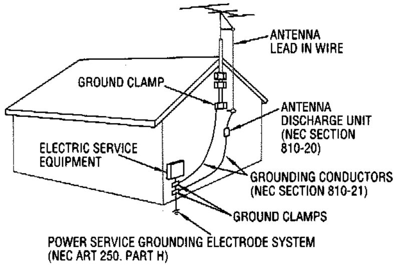
2. Lightning

For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

3. Power Lines

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE, ANSI/NFPA 70


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250. PART H)

NEC – NATIONAL ELECTRICAL CODE

USE

1. Accessories

To avoid personal injury:

- Do not place this product on an unstable cart, stand, tripod, bracket or table. It may fall, causing serious injury to a child or adult, and serious damage to the product.
- Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product.
- Use a mounting accessory recommended by the manufacturer and follow the manufacturer's instructions for any mounting of the product.
- Do not try to roll a cart with small casters across thresholds or deep-pile carpets.

2. Product and Cart Combination

A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

PORTABLE CART WARNING
(Symbol provided by RETAC)

3. Water and Moisture

Do not use this product near water—for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool and the like.

4. Object and Liquid Entry

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

5. Attachments

Do not use attachments not recommended by the manufacturer of this product as they may cause hazards.

6. Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

7. Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

SERVICING

1. Servicing

If your product is not operating correctly or exhibits a marked change in performance and you are unable to restore normal operation by following the detailed procedure in its operating instructions, do not attempt to service it yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

2. Damage Requiring Service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- **a.** When the power supply cord or plug is damaged.
- **b.** If liquid has been spilled, or objects have fallen into the product.
- **c.** If the product has been exposed to rain or water.
- **d.** If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- **e.** If the product has been dropped or damaged in any way.
- **f.** When the product exhibits a distinct change in performance—this indicates a need for service.

3. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

4. Safety Check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in safe operating condition.

SAFETY PRECAUTIONS

Do not point the lens or the viewfinder directly into the sun. This can cause eye injuries, as well as lead to the malfunctioning of internal circuitry. There is also a risk of fire or electric shock.

CAUTION!

The following notes concern possible physical damage to the camcorder and to the user.

When carrying, be sure to always securely attach and use the provided shoulder strap. Carrying or holding the camcorder by the viewfinder and/or the LCD monitor can result in dropping the unit, or in a malfunction.

Take care not to get your finger caught in the cassette holder cover. Do not let children operate the camcorder, as they are particularly susceptible to this type of injury.

Do not use a tripod on unsteady or unlevel surfaces. It could tip over, causing serious damage to the camcorder.

CAUTION!

Connecting cables (Audio/Video, S-Video, Editing, DC, etc.) to the camcorder and leaving the unit on top of the TV is not recommended, as tripping on the cables will cause the camcorder to fall, resulting in damage.

Mini DV NTSC

- This camcorder is designed exclusively for the digital video cassette. Only cassettes marked "MiniDV" can be used with this unit.

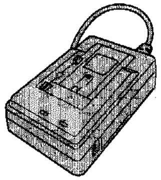
Before recording an important scene . . .

.... make sure you only use cassettes with the Mini DV mark MiniDV.

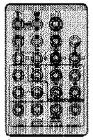
.... remember that this camcorder is not compatible with other digital video formats.

.... remember that this camcorder is intended for private consumer use only. Any commercial use without proper permission is prohibited. (Even if you record an event such as a show, performance or exhibition for personal enjoyment, it is strongly recommended that you obtain permission beforehand.)

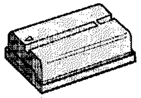
PROVIDED ACCESSORIES



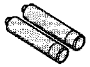
- AC Power Adapter/Charger
  AA-V40U



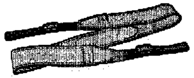
- Remote Control Unit
  RM-V716U



- Battery Pack BN-V408U

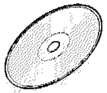


- AAA (R03) Battery x 2
  (for remote control unit)



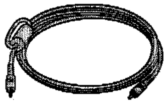
- Shoulder Strap

- Lens Cap

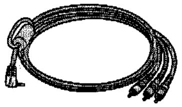


- CD-ROM
  The CD ROM contains the following 5 software programs:
  - JLIP Video Capture
  - JLIP Video Producer

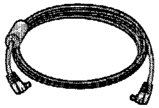
  Presto!
  - Mr. Photo
  - PhotoAlbum
  - ImageFolio



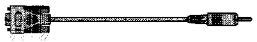
- Editing Cable



- Audio/Video Cable
  (ø3.5 mini-plug to RCA plug)

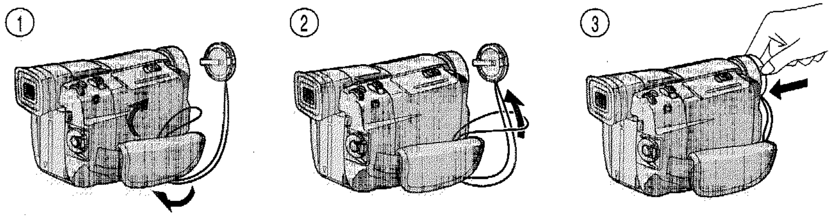


- DC Cord



- PC Connection Cable

How To Attach The Lens Cap

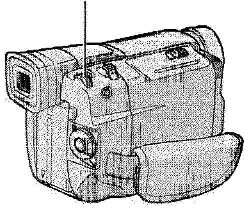


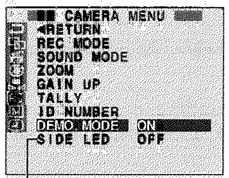
To protect the lens, attach the provided lens cap to the camcorder as shown in the illustration.

AUTOMATIC DEMONSTRATION

Automatic Demonstration takes place when "DEMO. MODE" is set to "ON" (factory-preset).

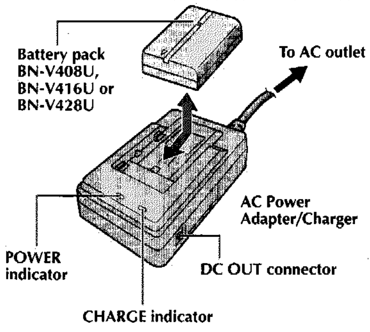
- ■ Available when the Power Switch is set to "A" or "M" and no cassette is in the camcorder.
- ■ Performing any operation during the demonstration stops the demonstration temporarily. If no operation is performed for more than 1 minute after that, the demonstration will resume.
- ■ "DEMO. MODE" remains "ON" even if the camcorder power is turned off.
- ■ To cancel Automatic Demonstration, set the Power Switch to "M", then press the **MENU/BRIGHT** wheel while the demo is in progress. This takes you directly to the demo mode's Setting Menu (so you will not have to go through the Menu Screen). Rotate the **MENU/BRIGHT** wheel to select "OFF" and press it. The normal screen appears.





```
CAMERA MENU
◄RETURN
REC MODE
SOUND MODE
ZOOM
GAIN UP
TALLY
ID NUMBER
DEMO. MODE    ON
SIDE LED      OFF
```

GR-DVL500 only



Battery pack	Fully charging time
BN-V408U	approx. 1 hr. 30 min.
BN-V416U (optional)	approx. 2 hrs.
BN-V428U (optional)	approx. 3 hrs. 20 min.

Power

This camcorder's 2-way power supply system lets you choose the most appropriate source of power. Do not use provided power supply units with other equipment.

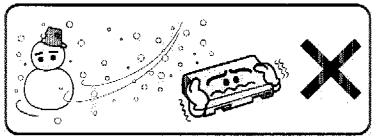
CHARGING THE BATTERY PACK

1 Make sure you unplug the camcorder's DC cord from the AC Power Adapter/Charger. Plug the AC Adapter/Charger's power cord into an AC outlet. The POWER indicator lights.

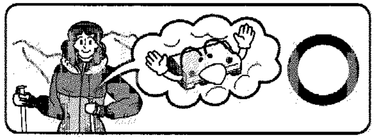
2 Attach the battery pack with the ⊕ ⊖ mark aligned with the corresponding marks on the AC Power Adapter/Charger. The CHARGE Indicator begins blinking to indicate charging has started.

3 When the CHARGE indicator stops blinking but stays lit, charging is finished. Slide the battery and lift off. Remember to unplug the AC Adapter/Charger's power cord from the AC outlet.

NOTES:
- *If the protective cap is attached to the battery pack, remove it first.*
- *Perform charging where the temperature is between 10°C and 35°C (50°F and 95°F). 20°C to 25°C (68°F to 77°F) is the ideal temperature range for charging. If the environment is too cold, charging may be incomplete.*
- *Charging times noted above are for a fully discharged battery pack.*
- *Charging time varies according to the ambient temperature and the status of the battery pack.*
- *To avoid interference with reception, do not use the AC Power Adapter/Charger near a radio.*
- *If you connect the camcorder's DC cord to the adapter during battery charging, power is supplied to the camcorder and charging stops.*
- *Since the AC Power Adapter/Charger processes electricity internally, it becomes warm during use. Be sure to use it only in well-ventilated areas.*
- *When charging the battery pack for the first time or after a long storage period, the CHARGE indicator may not light. In this case, remove the battery pack from the AC Power Adapter/Charger, then try charging again.*
- *If the battery operation time remains extremely short even after having been fully charged, the battery is worn out and needs to be replaced. Please purchase a new one.*



Lithium-ion is vulnerable in colder temperatures.



About Batteries

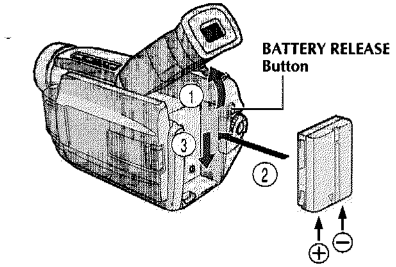
DANGER! Do not attempt to take the batteries apart, or expose them to flame or excessive heat, as it may cause a fire or explosion.

WARNING! Do not allow the battery or its terminals to come in contact with metals, as this can result in a short circuit and possibly start a fire.

The Benefits Of Lithium-Ion Batteries

Lithium-ion battery packs are small but have a large power capacity. However, when one is exposed to cold temperatures (below 10°C/50°F), its usage time becomes shorter and it may cease to function. If this happens, place the battery pack in your pocket or other warm, protected place for a short time, then re-attach it to the camcorder. As long as the battery pack itself is not cold, it should not affect performance.

(If you're using a heating pad, make sure the battery pack does not come in direct contact with it.)



ATTENTION:
Before detaching the power source, make sure that the camcorder's power is turned off. Failure to do so can result in a camcorder malfunction.

INFORMATION:
VU-V856KIT is a set composed of the BN-V856U battery pack and AA-V80U AC Power Adapter/Charger. Read the VU-V856KIT's instruction manuals before using.
It is impossible to charge the BN-V856U battery pack using the provided AC Power Adapter/Charger. Use the optional AA-V80U AC Power Adapter/Charger.

USING THE BATTERY PACK

1 Tilt the viewfinder upward ①.

2 With the arrow on the battery pack pointing downward, push the battery pack slightly against the battery pack mount ②, then slide down the battery pack to attach it ③.
- If the battery pack is attached with its ⊕ ⊖ mark set in the wrong direction, a malfunction may occur.

To Detach The Battery Pack. . .
.... tilt the viewfinder upward ① and slide the battery pack up slightly while pressing **BATTERY RELEASE** to detach it.

Approximate recording time

Battery pack	LCD monitor on/ Viewfinder off	LCD monitor off/ Viewfinder on
BN-V408U	1 hr. (35 min.)	1 hr. 15 min. (40 min.)
BN-V416U (optional)	2 hrs. (1hr. 10 min.)	2 hrs. 30 min. (1 hr. 20 min.)
BN-V428U (optional)	3 hrs. 30 min. (2 hrs.)	4 hrs. 20 min. (2 hrs. 20 min.)
BN-V856U (optional)	7 hrs. (4 hrs.)	8 hrs. 40 min. (4 hrs. 40 min.)

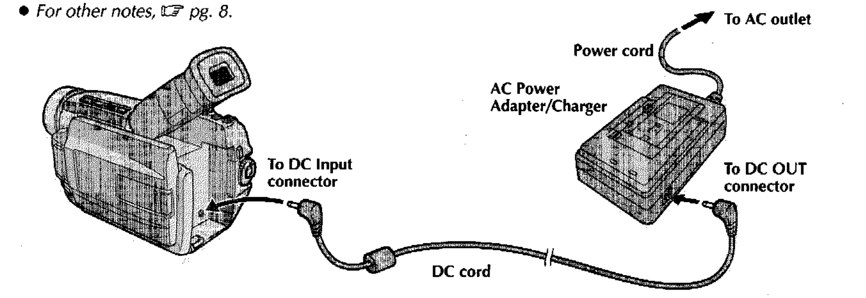
( ) : when the video light is on.

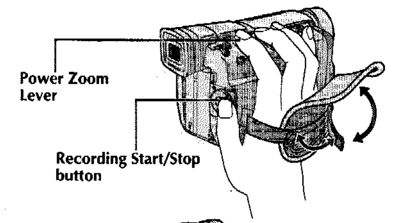
NOTES:
- *Recording time is reduced significantly under the following conditions:*
  - *Zoom or Record-Standby mode is engaged repeatedly.*
  - *The LCD monitor is used repeatedly.*
- *Before extended use, it is recommended that you prepare enough battery packs to cover 3 times the planned shooting time.*

USING AC POWER

Use the AC Power Adapter/Charger (connect as shown in the illustration).

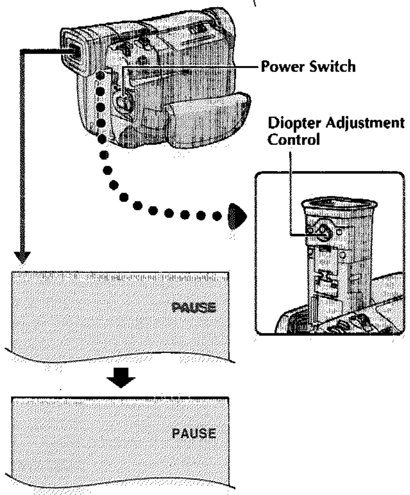
NOTES:
- *The provided AC Power Adapter/Charger features automatic voltage selection in the AC range from 110 V to 240 V.*
- *For other notes, ☞ pg. 8.*




Power Zoom Lever
Recording Start/Stop button

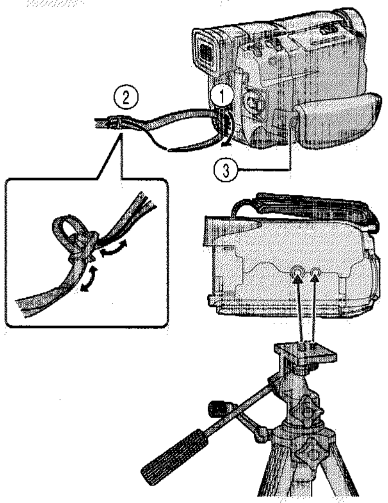
Grip Adjustment

1. Separate the Velcro strip.
2. Pass your right hand through the loop and grasp the grip.
3. Adjust so that your thumb and fingers can easily operate the Recording Start/Stop Button and Power Zoom Lever. Refasten the Velcro strip.


Power Switch
Diopter Adjustment Control
PAUSE
PAUSE

Viewfinder Adjustment

1. Set the Power Switch to " A " or " M " while pressing down the Lock Button located on the switch.
2. Turn the Diopter Adjustment Control until the indications in the viewfinder are clearly focused.



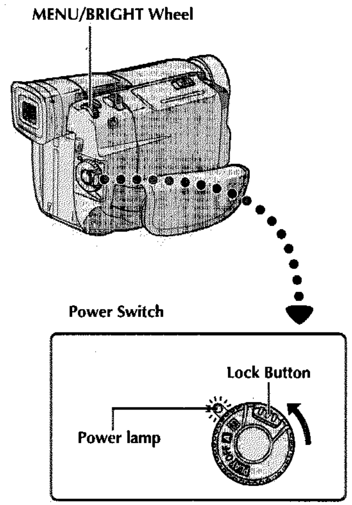
Shoulder Strap Attachment

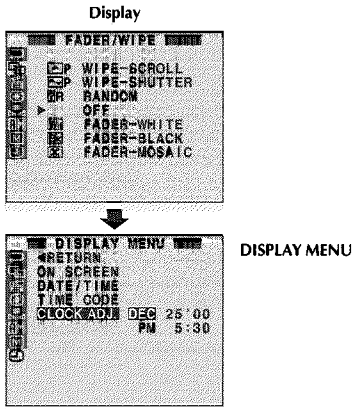
1. Make sure the battery pack or DC cord is removed. Following the illustration, thread the strap through the eyelet ①, then fold it back and thread it through the buckle ②. Repeat the procedure to attach the other end of the strap to the other eyelet ③, making sure the strap is not twisted.

Tripod Mounting

1. Align the screw and camera direction stud on the tripod with the camera's mounting socket and stud hole. Then tighten the screw.
   - Some tripods are not equipped with studs.

CAUTION:
When using a tripod, be sure to open and extend its legs fully to stabilize the camcorder. To prevent damage to the unit caused by falling over, do not use a small-sized tripod.


MENU/BRIGHT Wheel
Power Switch
Lock Button
Power lamp

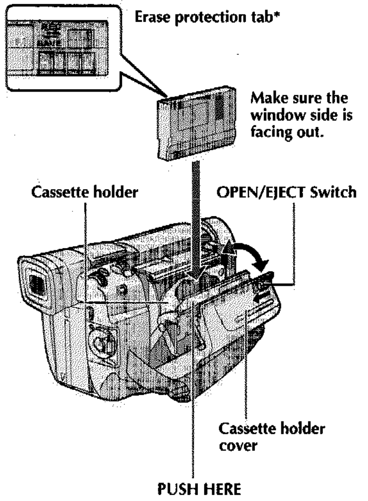

Display
FADER/WIPE
WIPE-SCROLL
WIPE-SHUTTER
RANDOM
OFF
FADER-WHITE
FADER-BLACK
FADER-MOSAIC
DISPLAY MENU
RETURN
ON SCREEN
DATE/TIME
TIME CODE
CLOCK ADJ.
DEC 25'00
PM 5:30
DISPLAY MENU

Date/Time Settings

The date/time is recorded onto the tape at all times, but its display can be turned on or off during playback (☞ pg. 32).

1. Set the Power Switch to " M " while pressing down the Lock Button located on the switch. The power lamp lights and the camcorder is turned on.
2. Press the **MENU/BRIGHT** wheel. The Menu Screen appears.
3. Rotate the **MENU/BRIGHT** wheel to select " ▣ ". Press it and "DISPLAY MENU" appears.
4. Rotate the **MENU/BRIGHT** wheel to select "CLOCK ADJ.". Press it and "month" is highlighted. Rotate the **MENU/BRIGHT** wheel to input the month. Press it. Repeat to input the day, year, hour and minute. Rotate the **MENU/BRIGHT** wheel to select "◄RETURN", and press it twice. The Menu Screen closes.

NOTE:
*Even if you select "CLOCK ADJ.", if the parameter is not highlighted the camcorder's internal clock continues to operate. Once you move the highlight bar to the first date/time parameter (month), the clock stops. When you finish setting the minute and press the **MENU/BRIGHT** wheel, the date and time begin operation from the date and time you just set.*



**** To Protect Valuable Recordings . . .***
. . . . slide the erase protection tab on the back of the tape in the direction of "SAVE". This prevents the tape from being recorded over. To record on this tape, slide the tab back to "REC" before loading it.

Loading/Unloading A Cassette

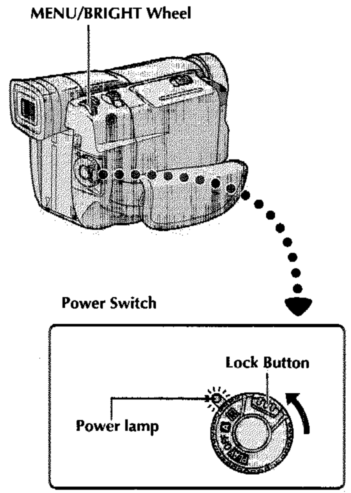
The camcorder needs to be powered up to load or eject a cassette.

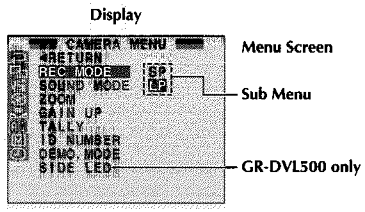
1. Slide **OPEN/EJECT** in the direction of the arrow then pull the cassette holder cover open until it locks. The cassette holder opens automatically.
   - Do not touch internal components.
2. Insert or remove a tape and press "PUSH HERE" to close the cassette holder.
   - Once the cassette holder is closed, it recedes automatically. Wait until it recedes completely before closing the cassette holder cover.
   - When the battery's charge is low, you may not be able to close the cassette holder cover. Do not apply force. Replace the battery with a fully charged one before continuing.
3. Close the cassette holder cover firmly until it locks into place.

Approximate recording time

Tape	Recording mode	
	SP	LP
30 min.	30 min.	45 min.
60 min.	60 min.	90 min.
80 min.	80 min.	120 min.

NOTES:
- *It takes a few seconds for the cassette holder to open. Do not apply force.*
- *If you wait a few seconds and the cassette holder does not open, close the cassette holder cover and try again. If the cassette holder still does not open, turn the camcorder off then on again.*
- *If the tape does not load properly, open the cassette holder cover fully and remove the cassette. A few minutes later, insert it again.*
- *When the camcorder is suddenly moved from a cold place to a warm environment, wait a short time before opening the cassette holder cover.*
- *Closing the cassette holder cover before the cassette holder comes out may cause damage to the camcorder.*
- *Even when the camcorder is switched off, a cassette can be loaded or unloaded. After the cassette holder is closed with the camcorder switched off, however, it may not recede. It is recommended to turn the power on before loading or unloading.*
- *When resuming recording, once you open the cassette holder cover a blank portion will be recorded on the tape or a previously recorded scene will be erased (recorded over) regardless of whether the cassette holder came out or not. See page 19 for information about recording from the middle of a tape.*





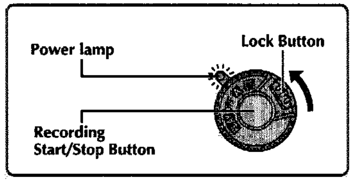
Recording Mode Setting

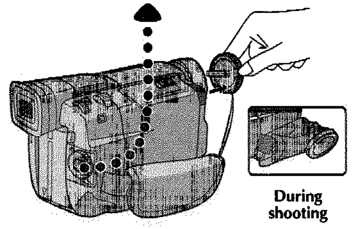
Set the tape recording mode depending on your preference.

1. Set the Power Switch to "M" while pressing down the Lock Button located on the switch. The power lamp lights and the camcorder is turned on.
2. Press the **MENU/BRIGHT** wheel. The Menu Screen appears.
3. Rotate the **MENU/BRIGHT** wheel to select "AM" and press it. "CAMERA MENU" appears.
4. Rotate the **MENU/BRIGHT** wheel to select "REC MODE" and press it. The Sub Menu appears. Select "SP" or "LP" by rotating the **MENU/BRIGHT** wheel and press it. Rotate the **MENU/BRIGHT** wheel to select "◄RETURN", and press it twice. The Menu Screen closes.
   - Audio Dubbing (☞ pg. 50) and Insert Editing (☞ pg. 51) are impossible on a tape recorded in the LP mode.
   - "LP" (Long Play) is more economical, providing 1.5 times the recording time.

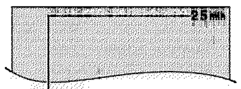
NOTES:
- *If the recording mode is switched during recording, the playback picture will be blurred at the switching point.*
- *It is recommended that tapes recorded in the LP mode on this camcorder be played back on this camcorder.*
- *During playback of a tape recorded on another camcorder, blocks of noise may appear or there may be momentary pauses in the sound.*

Power Switch

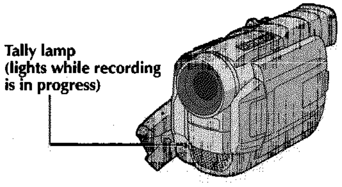


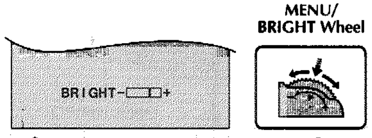


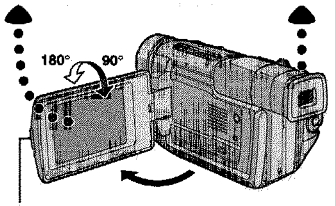
Display


Tape remaining time indicator (Approximate)

-- min ——▸ 90 min ——▸ 89 min ·····▸ 3 min
(Now calculating)
0 min ◂—— 1 min ◂—— 2 min
(Blinking) (Blinking) (Blinking)







NOTE:

You should already have performed the procedures listed below. If not, do so before continuing.

- *Power (☞ pg. 8)*
- *Grip Adjustment (☞ pg. 10)*
- *Viewfinder Adjustment (☞ pg. 10)*
- *Load A Cassette (☞ pg. 12)*
- *Recording Mode Setting (☞ pg. 13)*

1 Press in the tabs on the lens cap to remove it.

2 Set the Power Switch to "Ⓐ" or "Ⓜ" while pressing down the Lock Button located on the switch.

Shooting while using the LCD monitor: Press **PUSH OPEN** and open the LCD monitor fully. Tilt it upward/ downward for best viewability.

Shooting while using the viewfinder: Close the LCD monitor.

- The power lamp lights and the camcorder enters the Record-Standby mode. "PAUSE" is displayed.

3 Press the Recording Start/Stop Button. "REC ▸▸▸" appears while recording is in progress.

To Stop Recording . . .

.... press the Recording Start/Stop Button. The camcorder re-enters the Record-Standby mode.

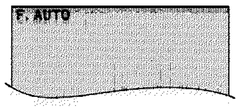
To Adjust The Brightness Of The Display

.... rotate the **MENU/BRIGHT** wheel until the bright level indicator on the display moves and the appropriate brightness is reached.

- If you are using the GR-DVL500, it is also possible to adjust the brightness of the viewfinder by closing the LCD monitor and adjusting as described above.

Power Switch Position

Ⓜ **(Manual)**	: Allows you to set various recording functions using the Menus. If you want more creative capabilities than Full Auto recording, try this mode.
Ⓐ **(Full Auto)**	: Allows you to record using NO special effects or manual adjustments. Suitable for standard recording.
OFF	: Allows you to switch off the camcorder.
PLAY	: Allows you to play back a recording on the tape.

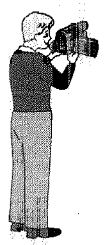


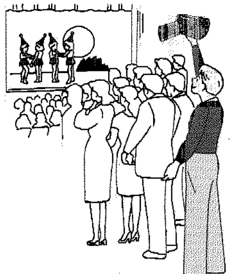
When the Power Switch is set to "Ⓐ", "F. AUTO" appears. When set to "Ⓜ" or "PLAY", there is no indication.

NOTES:

- *When you use the LCD monitor outdoors in direct sunlight, the LCD monitor may be difficult to see. If this happens, use the viewfinder instead.*
- *The image will not appear simultaneously in the LCD monitor and the viewfinder .*
- *The cassette holder cannot be opened unless a power supply is attached.*
- *There may be a delay after you open the cassette holder cover until the cassette holder opens. Do not use force.*
- *Once the cassette holder is closed, it recedes automatically. Wait until it recedes completely before closing the cassette holder cover.*
- *The time required to calculate and display the remaining tape length, and the accuracy of the calculation, may vary according to the type of tape used.*
- *"TAPE END" appears when the tape reaches its end, and the power goes off automatically if left in this condition for 5 minutes. "TAPE END" also appears when a cassette at its end is loaded.*
- *If the Record-Standby mode continues for 5 minutes, the camcorder's power shuts off automatically. To turn the camcorder on again, set the Power Switch to "OFF", then back to "Ⓐ" or "Ⓜ".*
- *When a blank portion is left between recorded scenes on the tape, the time code is interrupted and errors may occur when editing the tape. To avoid this, refer to "Recording from the middle of a tape" (☞ pg. 19).*
- *During recording, sound is not heard from the speaker.*
- ***To turn the tally lamp off during recording, ☞ pg. 22, 23.***
- ***To remove the indications from the camcorder's display during recording, ☞ pg. 22, 25.***

Self-Recording



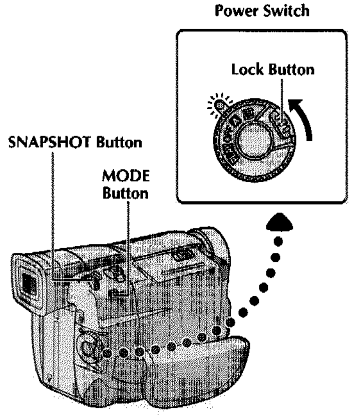


JOURNALISTIC SHOOTING

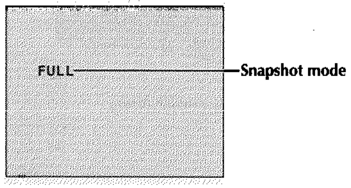
In some situations, different shooting angles may provide more dramatic results. Hold the camcorder in the desired position and tilt the LCD monitor in the most convenient direction. It can rotate 270° (90° downward, 180° upward).

SELF-RECORDING

You can shoot yourself while viewing your own image in the LCD monitor. Open the LCD monitor and tilt it upward 180° so that it faces forward, then point the lens toward yourself and start recording.



Display



Snapshot

This feature lets you record still images that look like photographs onto a tape.

SNAPSHOT MODE SELECTION

1. Set the Power Switch to "A" or "M" while pressing down the Lock Button located on the switch.
2. Choose the appropriate Snapshot mode from the 5 available by repeatedly pressing **MODE** until the desired snapshot mode indicator appears.

SNAPSHOT RECORDING

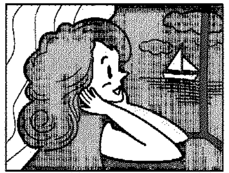
1. Press **SNAPSHOT**.

   If you press during Record-Standby . . .
   .... "PHOTO" appears and a still image will be recorded for approx. 6 seconds, then the camcorder re-enters the Record-Standby mode.

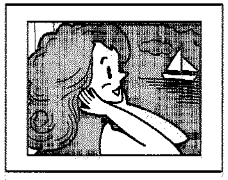
   If you press during Recording . . .
   .... "PHOTO" appears and a still image will be recorded for approx. 6 seconds, then the normal recording resumes.

Motor Drive Mode

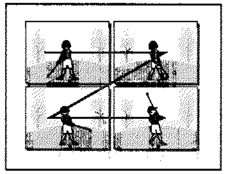
Keeping **SNAPSHOT** pressed provides an effect similar to serial photography. (Interval between still images: approx. 1 second)



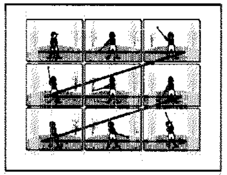
FULL
Snapshot mode with no frame*



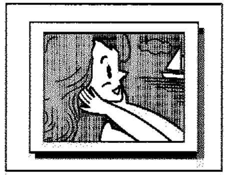
FRAME
Snapshot mode with frame*



MULTI-4
Multi-Analyzer 4



MULTI-9
Multi-Analyzer 9

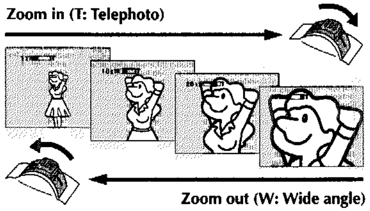


PIN-UP
Pin-Up mode*

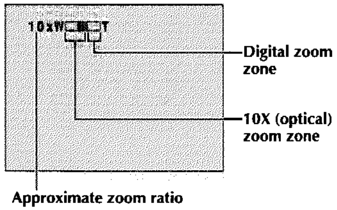
NOTES:
- *Even if "MULTI-4" or "MULTI-9" is engaged, Snapshot recording will be performed in the FULL mode during Digital Zoom.*
- *If Snapshot recording is not possible, "PHOTO" blinks when **SNAPSHOT** is pressed.*
- *If Program AE with special effects (☞ pg. 28) is engaged, certain modes of Program AE with special effects are disabled during Snapshot recording. In such a case, the icon blinks.*
- *If **SNAPSHOT** is pressed when "DIS" is set to "ON" (☞ pg. 24), the Stabilizer will be disabled.*
- *During playback as well, all Snapshot modes are available. The shutter sound is not heard.*
- *During Snapshot recording, the image displayed in the viewfinder may be partially missing. However, there is no effect in the recorded image.*
- *When a cable is connected to the AV connector, the shutter sound is not heard from the speaker, however it is recorded onto the tape.*
- *REC ▶▶▶ will appear while the snapshot is being taken.*

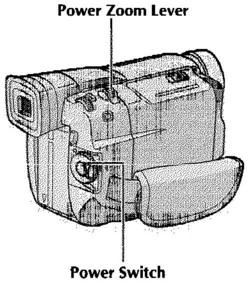
---

* There is the sound effect of a shutter closing.


Zoom in (T: Telephoto)
Zoom out (W: Wide angle)

Zoom display


10xW T
Digital zoom zone
10X (optical) zoom zone
Approximate zoom ratio


Power Zoom Lever
Power Switch

FEATURE: Zooming

PURPOSE:
To produce the zoom in/out effect, or an instantaneous change in image magnification.

OPERATION:

Zoom In
Slide the Power Zoom Lever towards "T".

Zoom Out
Slide the Power Zoom Lever towards "W".

- The further you slide the Power Zoom Lever, the quicker the zoom action.

NOTES:

- *Focusing may become unstable during Zooming. In this case, set the zoom while in Record-Standby, lock the focus by using the manual focus (☞ pg. 21), then zoom in or out in Record mode.*
- *Zooming is possible to a maximum of 250X, or it can be switched to 10X magnification using the optical zoom (☞ pg. 23).*
- *Zoom magnification of over 10X is done through Digital image processing, and is therefore called Digital Zoom.*
- *During Digital zoom, the quality of image may suffer.*
- *Digital zoom cannot be used when digital image processing, such as Picture Wipe/Dissolve (☞ pg. 26, 27) or Video Echo (☞ pg. 28), is activated.*
- *Macro shooting (as close as approx. 5 cm (2") to the subject) is possible when the Power Zoom Lever is set all the way to "W". Also see "TELE MACRO" in the Menu Screen on page 24.*

NOTE: Recording From The Middle Of A Tape

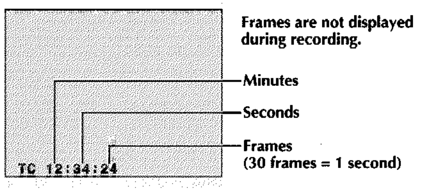
Time Code

During recording, a time code is recorded on the tape. This code is to confirm the location of the recorded scene on the tape during playback.
If recording starts from a blank portion, the time code begins counting from "00:00:00" (minute:second:frame). If recording starts from the end of a previously recorded scene, the time code continues from the last time code number.

To perform Random Assemble Editing (☞ pg. 44 – 49), time code is necessary. If during recording a blank portion is left partway through the tape, the time code is interrupted. When recording is resumed, the time code starts counting up again from "00:00:00". This means the camcorder may record the same time codes as those existing in a previously recorded scene. To prevent this, perform "Recording From The Middle of A Tape" below in the following cases;

- When shooting again after playing back a recorded tape.
- When power shuts off during shooting.
- When a tape is removed and re-inserted during shooting.
- When shooting using a partially recorded tape.
- When shooting on a blank portion located partway through the tape.
- When shooting again after shooting a scene then opening/closing the cassette holder cover.

Display


TC 12:34:24
Frames are not displayed during recording.
Minutes
Seconds
Frames
(30 frames = 1 second)

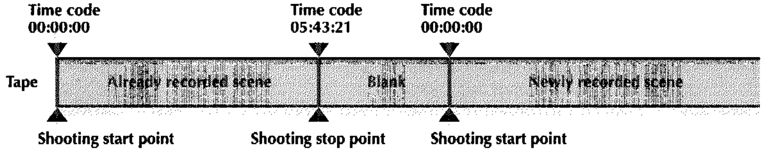
Recording From The Middle Of A Tape

1. Play back a tape to find the spot at which you want to start recording, then engage the Still Playback mode (☞ pg. 31).
2. Set the Power Switch to "A" or "M" while pressing down the Lock Button located on the switch, then start recording.

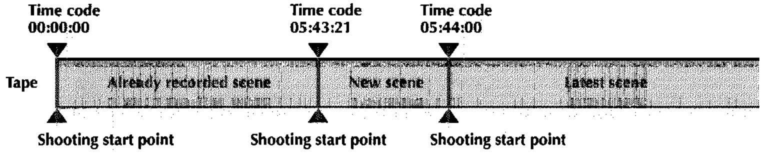
NOTES:

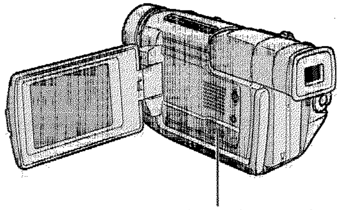
- *The time code cannot be reset.*
- *During fast-forwarding and rewinding, the time code indication does not move smoothly.*
- *The time code is displayed only when "TIME CODE" is set to "ON" (☞ pg. 25, 32).*

When a blank portion is recorded on a tape


Time code 00:00:00
Time code 05:43:21
Time code 00:00:00
Tape
Already recorded scene
Blank
Newly recorded scene
Shooting start point
Shooting stop point
Shooting start point

Proper recording


Time code 00:00:00
Time code 05:43:21
Time code 05:44:00
Tape
Already recorded scene
New scene
Latest scene
Shooting start point
Shooting start point
Shooting start point



LIGHT OFF/AUTO/ON Switch
(Open the LCD monitor to access this switch.)

DANGER

- The video light can become extremely hot. Do not touch it either while in operation or soon after turning it off, otherwise serious injury may result.
- Do not place the camcorder into the carrying case immediately after using the video light, since it remains extremely hot for some time.
- When operating, keep a distance of about 30 cm (11-13/16") between the video light and people or objects.
- Do not use near flammable or explosive materials.
- It is recommended that you consult your nearest JVC dealer for replacing the video light.

FEATURE: Video Light

PURPOSE:

To brighten the scene when natural lighting is too dim.

OPERATION:

Set **LIGHT OFF/AUTO/ON** as required:

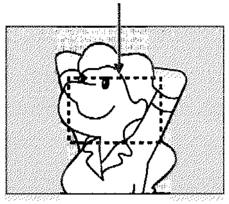
OFF : Turns off the light.
AUTO : Automatically turns on the light when the camcorder senses insufficient lighting on the subject.
ON : Always keeps the light on as long as the camcorder is turned on.

- The video light can only be used with the camcorder's power on.
- It is recommended to set the white balance (☞ pg. 30) to ☀ when you use the video light.
- When not using the video light, turn it off to save battery power.

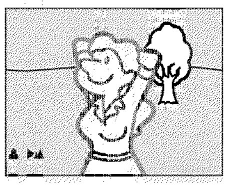
NOTES:

- *Even if the battery indicator (▭) does not blink due to low battery charge, the camcorder may turn off automatically when you turn on the video light, or when you start recording with the video light turned on.*
- *When **LIGHT OFF/AUTO/ON** is set to "AUTO":*
  - *Depending on the lighting conditions, the video light may keep turning on and off. In this case, manually switch the light on or off using **LIGHT OFF/AUTO/ON**.*
  - *While the "SHUTTER" mode (☞ pg. 28) is engaged, the light is likely to stay on.*
  - *While the "TWILIGHT" mode (☞ pg. 28) is engaged, the light will not activate.*

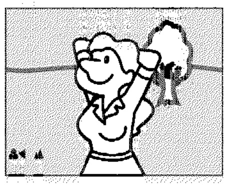
Focus detection zone



While focusing on a further subject



While focusing on a nearer subject



FEATURE: Auto Focus

PURPOSE:

The camcorder's Full Range AF system offers continuous shooting ability from close-up (as close as approx. 5 cm (2") to the subject) to infinity.

However, correct focus may not be obtainable in the situations listed below (in these cases use manual focusing):

- When two subjects overlap in the same scene.
- When illumination is low.*
- When the subject has no contrast (difference in brightness and darkness), such as a flat, one-color wall, or a clear, blue sky.*
- When a dark object is barely visible in the viewfinder.*
- When the scene contains minute patterns or identical patterns that are regularly repeated.
- When the scene is affected by sunbeams or light reflecting off the surface of a body of water.
- When shooting a scene with a high-contrast background.

* The following low-contrast warnings appear blinking: ▲, ◀, ▶ and ▲

NOTES:

- *If the lens is smeared or blurred, accurate focusing is not possible. Keep the lens clean, wiping with a piece of soft cloth if it gets dirty. When condensation occurs, wipe with a soft cloth or wait for it to dry naturally.*
- *When shooting a subject close to the lens, zoom out first (☞ pg. 18). If zoomed-in in the auto focus mode, the camcorder may automatically zoom out depending on the distance between the camcorder and the subject. This will not occur when "TELE MACRO" (☞ pg. 24) is activated.*

FEATURE: Manual Focus

PURPOSE:

To obtain correct focus.

OPERATION:

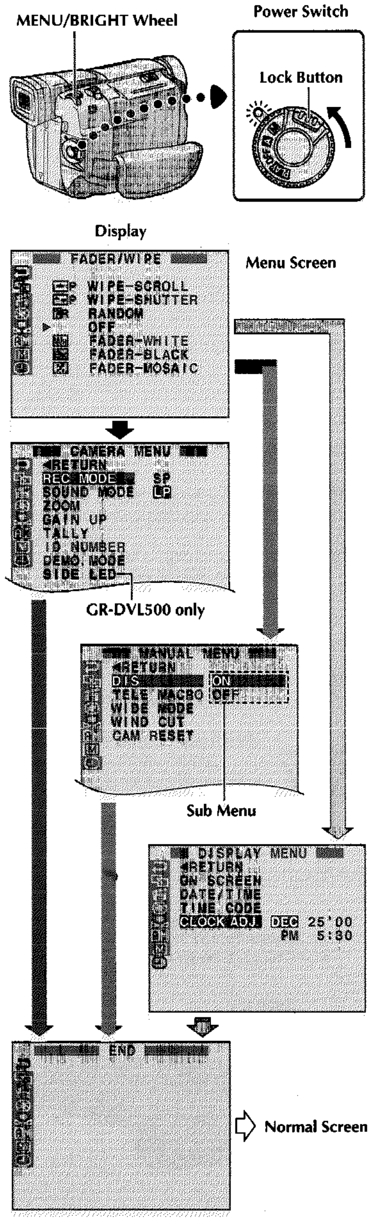
1) If you are using the viewfinder, you should already have made the necessary viewfinder adjustments (☞ pg. 10).
2) Set the Power Switch to "M", then press **FOCUS** (▶▶). The manual focus indicator appears.
3) To focus on a farther subject, rotate the **MENU/BRIGHT** wheel towards "+". "▶" appears and blinks.
   To focus on a nearer subject, rotate the **MENU/BRIGHT** wheel towards "–". "◀" appears and blinks.
4) Press the **MENU/BRIGHT** wheel. Focus adjustment is complete.

To reset to Auto Focus, press **FOCUS** (▶▶) twice or set the Power Switch to "A".

If **FOCUS** (▶▶) is pressed once, the camcorder will enter the focus adjustment mode again.

NOTES:

- *Be sure to focus the lens in the maximum telephoto position when you use the Manual Focus mode. If you focus in on a subject in the wide-angle position, sharply focused images cannot be obtained when zoomed up because the depth-of-field is reduced at longer focal lengths.*
- *When the focus level cannot be adjusted any further or closer, "▲" or "▲" will blink.*


MENU/BRIGHT Wheel
Power Switch
Lock Button
Display
Menu Screen
FADER/WIPE
WIPE-SCROLL
WIPE-SHUTTER
RANDOM
OFF
FADER-WHITE
FADER-BLACK
FADER-MOSAIC
CAMERA MENU
◄RETURN
REC MODE SP
SOUND MODE LP
ZOOM
GAIN UP
TALLY
ID NUMBER
DEMO. MODE
SIDE LED
GR-DVL500 only
MANUAL MENU
◄RETURN
DIS ON
TELE MACRO OFF
WIDE MODE
WIND CUT
CAM RESET
Sub Menu
DISPLAY MENU
◄RETURN
ON SCREEN
DATE/TIME
TIME CODE
CLOCK ADJ. DEC 25'00
PM 5:30
END
Normal Screen

Using Menus For Detailed Adjustment

This camcorder is equipped with an easy-to-use, on-screen menu system that simplifies many of the more detailed camcorder settings (☞ pg. 23 – 25) .

1 Set the Power Switch to "M" while pressing down the Lock Button located on the switch.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

3 Rotate the **MENU/BRIGHT** wheel to select the desired function icon, and press it. The selected function menu appears.

4 Function menu setting depends on the function.

If you have selected "▣", "▣", "▣" or "▣"...
.... see pg. 23.

If you have selected "▣", "M" or "▣"...
.... go to step **5**.

5 Rotate the **MENU/BRIGHT** wheel to select the desired function and press it. The Sub Menu appears. Then, rotate the **MENU/BRIGHT** wheel to select the parameter, and press it. Selection is complete.

6 Rotate the **MENU/BRIGHT** wheel to select "◄RETURN" and press it twice. The Menu Screen closes.
- The ▣ icon represents "END".

Menu Screen Explanations

	FADER/WIPE		Refer to "Fade/Wipe Effects" (☞ pg. 26, 27).
	P.AE/EFFECT		Refer to "Program AE With Special Effects" (☞ pg. 28).
	EXPOSURE		Refer to "Exposure Control" and "Iris Lock" (☞ pg. 29).
	W.BALANCE		Refer to "White Balance Adjustment" and "Manual White Balance Operation" (☞ pg. 30).
CAMERA MENU	**REC MODE**		Allows you to set the recording mode (SP or LP) depending on your preference (☞ pg. 13).
	SOUND MODE	▨ **12 BIT**	Enables recording of stereo sound on four separate channels, and is recommended for use when performing audio dubbing (☞ pg. 50). (Equivalent to the 32 kHz mode of previous models)
		16 BIT	Enables recording of stereo sound on two separate channels. (Equivalent to the 48 kHz mode of previous models)
	ZOOM	**10X**	When set to "10X" while using digital zoom, the zoom magnification will reset to 10X since digital zoom will be disengaged.
		▨ **40X**	Allows you to use the Digital Zoom. By digitally processing and magnifying images, zooming is possible from 10X (the optical zoom limit), to a maximum of 40X digital magnification.
		250X	Allows you to use the Digital Zoom. By digitally processing and magnifying images, zooming is possible from 10X (the optical zoom limit), to a maximum of 250X digital magnification.
	GAIN UP	**OFF**	Allows you to shoot dark scenes with no picture brightness adjustment.
		▨ **AGC**	The overall appearance may be grainy, but the image is bright.
		AUTO A✲	The shutter speed is automatically adjusted (1/30 — 1/200 sec.). Shooting a subject in low or poor lighting at 1/30 sec. shutter speed provides a brighter image than in the AGC mode, but the subject's movements are not smooth or natural. The overall appearance may be grainy. When the shutter speed is automatically adjusted, "A✲" is displayed.
	TALLY	▨ **ON**	The tally lamp comes on to signal the start of recording.
		OFF	The tally lamp remains off at all times.
	ID NUMBER		This number is necessary when connecting the camcorder to a device such as a computer using the J terminal (JLIP). The numbers range from 01 to 99. Factory setting is 06.

▨ **: Factory-preset**

NOTES:
- *The "CM CAMERA MENU" settings are effective when the Power Switch is set to both "A" and "M".*
- *"REC MODE" can be set when the Power Switch is set to "M" or "PLAY" (☞ pg. 13, 32).*

CONTINUED ON NEXT PAGE

Menu Screen Explanations (cont.)

🄼 CAMERA MENU	DEMO. MODE	▨ ON	Demonstrates certain functions such as Program AE with special effects, etc., and can be used to confirm how these functions operate. When "DEMO. MODE" is set to "ON" and the Menu Screen is closed, demonstration starts. Performing any operation during the demonstration stops the demonstration temporarily. If no operation is performed for more than 1 minute after that, the demonstration will resume. **NOTES:** ● If a tape is in the camcorder, the demonstration cannot be turned on. ● "DEMO. MODE" remains "ON" even if the camcorder power is turned off. ● If "DEMO. MODE" remains "ON", some functions will not be available. After viewing demo, set to "OFF".
		OFF	Automatic demonstration will not take place.
	SIDE LED (GR-DVL500 only)	▨ ON OFF	The Side LED indicator (☞ pg. 62, 63) lights on the camcorder when using the AC Power Adapter/Charger as a power supply unit, and lights for approx. 5 seconds when using the battery pack. The Power Switch should be set to "🄰" or "🄼".
🄼 MANUAL MENU	DIS	ON ▨ OFF	To compensate for unstable images caused by camera-shake, particularly at high magnification. **NOTES:** ● Accurate stabilization may not be possible if hand shake is excessive, or under the following conditions: • When shooting subjects with vertical or horizontal stripes. • When shooting dark or dim subjects. • When shooting subjects with excessive backlighting. • When shooting scenes with movement in various directions. • When shooting scenes with low-contrast backgrounds. ● Switch off this mode when recording with the camcorder on a tripod. ● The "" indicator blinks or goes out if the Stabilizer cannot be used.
	TELE MACRO	ON ▨ OFF	Usually the distance to a subject where the lens is in focus depends on the zoom magnification. Unless there is a distance more than 1m (3.3 ft.) to the subject, the lens is out of focus at the maximum telephoto setting. When set to "ON", you can shoot a subject as large as possible at a distance of approx. 60 cm (2 ft.). • Depending on the zoom position, the lens may go out of focus.
	WIDE MODE	▨ OFF	Records with no change in the screen ratio. For playback on a TV with a normal screen ratio.
		CINEMA	Inserts black bands at the top and bottom of the screen. During playback on wide-screen TVs, the black bands at the top and bottom of the screen are cut and the screen ratio becomes 16:9. ☐ appears. When using this mode, refer to your wide-screen TV's instruction manual. During playback/recording on 4:3 TVs/LCD monitor/viewfinder, black bands are inserted at the top and bottom of the screen and the image appears like a letterboxed 16:9 movie.
		SQUEEZE	For playback on TVs with an aspect ratio of 16:9. Naturally expands the image to fit the screen without distortion. 🅆 appears. When using this mode, refer to your wide-screen TV's instruction manual. During playback/recording on 4:3 TVs/LCD monitor/viewfinder, the image is elongated vertically.

▨ : Factory-preset

🄼 MANUAL MENU	WIND CUT	ON	Helps cut down on noise created by wind. "" appears. The quality of the sound will change. This is normal.
		▨ OFF	Disengages the function which cuts down on noise created by wind.
	CAM RESET	▨ CANCEL	Does not reset all settings to the factory-preset.
		EXECUTE	Resets all settings to the factory-preset.
🄼 DISPLAY MENU	ON SCREEN	LCD	Keeps the camcorder's display (except the date, time and time code) from appearing on the connected TV screen.
		▨ LCD/TV	Makes the camcorder's display appear on screen when the camcorder is connected to a TV.
		SIMPLE	Keeps the indications (except the tape running indicator, warnings, date, time, time code, etc.) from appearing in the camcorder. Also keeps the camcorder's display (except the date, time and time code) from appearing on the connected TV screen.
	DATE/ TIME	▨ ON	The date/time is always displayed.
		OFF	The date/time does not appear.
	TIME CODE	ON	Time code is displayed on the camcorder and on the connected TV. Frame numbers are not displayed during recording.
		▨ OFF	Time code is not displayed.
	CLOCK ADJ.		Allows you to set the current date and time (☞ pg. 11).

▨ : Factory-preset

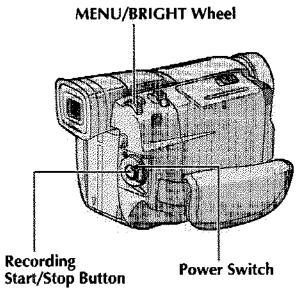
NOTES:

- *The "MANUAL MENU" settings are effective only when the Power Switch is set to "🄼".*
- *"DISPLAY MENU" functions which are set when the Power Switch is set to "🄼" are also applied when the Power Switch is set to "PLAY" (☞ pg. 32). "CLOCK ADJ." only appears when the Power Switch is set to "🄼".*
- *The "DISPLAY MENU" settings are effective even when the Power Switch is set to "🄰".*
- *The "ON SCREEN" setting can also be changed by pressing the **DISPLAY** Button on the remote control (provided) (☞ pg. 35, 38, 45).*

Fade/Wipe Effects

These effects let you make pro-style scene transitions. Use them to spice up the transition from one scene to the next. You can also vary transitions from scene to scene.

IMPORTANT:
Some Fade/Wipe Effects cannot be used with certain modes of Program AE with special effects (☞ pg. 28). If an unusable Fade/Wipe Effect is selected, its indicator blinks or goes out.



To Deactivate The Selected Effect . . .
.... select "OFF" in step **4**.

NOTES:
- *You can extend the length of a Fade or Wipe by pressing and holding the Recording Start/Stop Button.*
- *If the power is turned off after a scene is finished recording, the stored point is erased, disabling the Picture Wipe/Dissolve combination. When this happens, the Picture Wipe/Dissolve indicator blinks. Also note that power shuts off automatically if 5 minutes elapse in the Record-Standby mode.*
- *The sound at the end of the last recorded scene is not stored.*

FADE/WIPE SELECTION (WH, BK, ▩, BW, ◣, □, ◀, ◀▶, ▲, ▲▼ and ?R)

Fade or Wipe works when recording is started or when you stop recording.

1 Set the Power Switch to "M" while pressing down the Lock Button located on the switch.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

3 Rotate the **MENU/BRIGHT** wheel to select "▩", then press it.

4 Rotate the **MENU/BRIGHT** wheel to select the desired function, then press it. Selection is complete.
- The FADER/WIPE Menu disappears and the effect is reserved. The indicator representing the selected effect appears.

5 Press the Recording Start/Stop Button to activate the Fade-in/out or Wipe-in/out.

PICTURE WIPE OR DISSOLVE SELECTION (⧉P, ◣P, □P, ◀P, ◀▶P, ▲P and ▲▼P)

The Picture Wipe or Dissolve works when recording is started.

1 Follow steps **1** through **4** above.

2 ***If you select Picture Wipe/Dissolve during recording . . .***
.... press the Recording Start/Stop Button when one scene is finished. The point at which the scene ended is stored in memory.

If you select Picture Wipe/Dissolve during Record-Standby mode . . .
.... press the Recording Start/Stop Button to start recording and press it again when one scene is finished. The point at which the scene ended is stored in memory.

If you select Picture Wipe/Dissolve during Record-Standby mode after performing a Picture Wipe/ Dissolve . . .
.... the point at which the scene ended is already stored in memory.

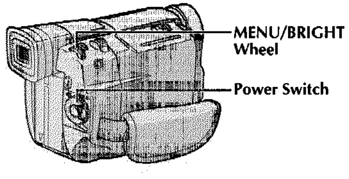
3 If you start recording a new scene within 5 minutes of the end of the previous recording (without having turned the camcorder's power off), the previous scene wipes out, revealing the new scene.

Fader And Wipe Menu

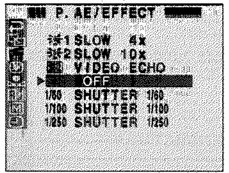
Menu	Effect
WH FADER — WHITE	Fade in or out with a white screen.
BK FADER — BLACK	Fade in or out with a black screen.
▩ FADER — MOSAIC	Fade in or out with a full-screen mosaic effect.
BW FADER — B.W	Fade in to a color screen from a black and white screen, or fade out from color to black and white.
◣ WIPE — CORNER	Wipe in on a black screen from the upper right to the lower left corner, or wipe out from lower left to upper right, leaving a black screen.
□ WIPE — WINDOW	The scene starts in the center of a black screen and wipes in toward the corners, or comes in from the corners, gradually wiping out to the center.
◀ WIPE — SLIDE	Wipe in from right to left, or wipe out from left to right.
◀▶ WIPE — DOOR	Wipe in as the two halves of a black screen open to the left and right, revealing the scene, or wipe out and the black screen reappears from left and right to cover the scene.
▲ WIPE — SCROLL	The scene wipes in from the bottom to the top of a black screen, or wipes out from top to bottom, leaving a black screen.
▲▼ WIPE — SHUTTER	Wipe in from the center of a black screen toward the top and bottom, or wipe out from the top and bottom toward the center leaving a black screen.
⧉P DISSOLVE	The new scene gradually appears as the old one gradually disappears.
◣P WIPE — CORNER	The new scene wipes in over the previous one from the upper right corner to the lower left corner.
□P WIPE — WINDOW	The next scene gradually wipes in from the center of the screen toward the corners, covering the previous scene.
◀P WIPE — SLIDE	The next scene gradually wipes in over the previous one from right to left.
◀▶P WIPE — DOOR	The previous scene wipes out from the center to the right and left, like a door being pushed open to reveal the next scene.
▲P WIPE — SCROLL	The new scene wipes in over the last one from the bottom of the screen to the top.
▲▼P WIPE — SHUTTER	The new scene wipes in over the previous one from the center toward the top and bottom of the screen.
?R RANDOM	When this function is activated, the camcorder randomly selects the effect used in scene transition (from BW, ▩, WH, BK, □, ▲, ▲▼, ◀, ◀▶, and ◣). The Picture Wipe/Dissolve function is not available.

IMPORTANT:

Some modes of Program AE with special effects cannot be used with certain Fade/Wipe Effects (☞ pg. 27). If an unusable mode is selected, its indicator blinks or goes out.



Display


```
P. AE/EFFECT
 1 SLOW  4x
 2 SLOW  10x
   VIDEO ECHO
 ▶ OFF
1/60  SHUTTER 1/60
1/100 SHUTTER 1/100
1/250 SHUTTER 1/250
```

Menu Screen

Program AE With Special Effects

1. Set the Power Switch to "M" while pressing down the Lock Button located on the switch.
2. Press the **MENU/BRIGHT** wheel. The Menu Screen appears.
3. Rotate the **MENU/BRIGHT** wheel to select "▣", then press it.
4. Rotate the **MENU/BRIGHT** wheel to select the desired mode, then press it. Selection is complete.
   - The P.AE/EFFECT Menu disappears and the selected mode is activated. The selected mode indicator appears.

To Deactivate The Selected Mode . . .

.... select "OFF" in step **4**.

NOTE:

Program AE with special effects can be changed during recording or during Record-Standby.

TWILIGHT

Makes evening scenes look more natural. White Balance (☞ pg. 30) is initially set to "☀", but can be changed to your desired setting. When Twilight is chosen, the camcorder automatically adjusts the focus from approx. 10 m (32 ft) to infinity. From less than 10 m (32 ft), adjust the focus manually.

SEPIA

Recorded scenes have a brownish tint like old photos. Combine this with the Cinema mode for a classic look.

B/W MONOTONE

Like classic black and white films, your footage is shot in B/W. Used together with the Cinema mode, it enhances the "classic film" effect.

CLASSIC FILM

Gives recorded scenes a strobe effect.

STROBE

Your recording looks like a series of consecutive snapshots.

VIDEO ECHO

Adds a "ghost" to the subject, giving your recording a "fantasy" feeling. Zoom magnification of over 10X is not available.

SLOW (Slow Shutter)

Lights dark subjects or areas even brighter than they would be under good natural lighting. Use "SLOW" only in dark areas.

1 SLOW 4X

The Shutter Speed is set to 1/15th of a second to quadruple the sensitivity.

2 SLOW 10X

The Shutter Speed is set to 1/6th of a second to provide 10 times the sensitivity.

NOTES:

- *When using "SLOW", the image takes on a strobe-like effect.*
- *If the manual focus indicator blinks when "SLOW" is used, adjust focus manually and use a tripod.*

SHUTTER (Variable Shutter Speed)

1/60–The shutter speed is fixed at 1/60th of a second. Black bands that usually appear when shooting a TV screen become narrower.

1/100–The shutter speed is fixed at 1/100th of a second. The flickering that occurs when shooting under a fluorescent light or mercury-vapor lamp is reduced.

1/250, 1/500 –These settings allow fast-moving images to be captured one frame at a time, for vivid, stable slow-motion playback. The faster the shutter speed, the darker the picture becomes. Use the shutter function under good lighting conditions.

Exposure Control

Manual exposure adjustment is recommended in the following situations:

- *When shooting using reverse lighting or when the background is too bright.*
- *When shooting on a reflective natural background such as at the beach or when skiing.*
- *When the background is overly dark or the subject light.*

1. Set the Power Switch to "M" while pressing down the Lock Button located on the switch.
2. Press the **MENU/BRIGHT** wheel. The Menu Screen appears.
3. Rotate the **MENU/BRIGHT** wheel to select "▣", then press it.
4. Rotate the **MENU/BRIGHT** wheel to select "MANUAL", then press it. The Menu Screen disappears. "EXP." and the highlight bar on the exposure control indicator are displayed.
5. Rotate the **MENU/BRIGHT** wheel towards "+" to brighten the image, or towards "–" to darken the image. (maximum ±6)
6. Press the **MENU/BRIGHT** wheel. Exposure adjustment is complete. The indication "EXP." and the highlight bar on the exposure control indicator go out.

To Return To Automatic Exposure Control . . .

.... select "AUTO" in step **4**. Or, set the Power Switch to "A".

NOTE:

To Brighten The Subject Quickly . . .

.... press **BACKLIGHT**. ▣ is displayed and the subject is brightened. If pressed again, ▣ disappears and the brightness returns to the previous level.

- +3 exposure has the same effect as the **BACKLIGHT** Button.
- Using **BACKLIGHT** may cause the light around the subject to become too bright and the subject to become white.
- Backlight compensation is also available when the Power Switch is set to "A".
- Pressing the **BACKLIGHT** button has no effect when the exposure ▣ is set to "MANUAL" and the Power Switch is set to "M".

Iris Lock

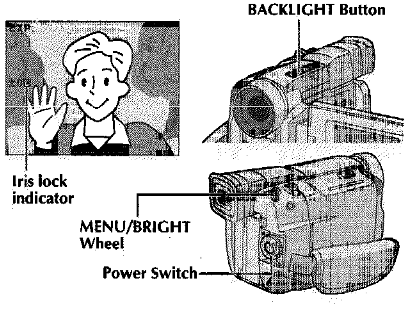
Use this function in the following situations:

- *When shooting a moving subject.*
- *When the distance to the subject changes (so its size in the LCD monitor or the viewfinder changes), such as when the subject is backing away.*
- *When shooting on a reflective natural background such as at the beach or when skiing.*
- *When shooting objects under a spotlight.*
- *When zooming.*

When the subject is close, keep the iris locked. Even when the subject moves away from you, the image will not darken or brighten.

Before the following steps, perform steps 1 through 4 of "Exposure Control".

5. Adjust zoom so that the subject fills the LCD monitor or the viewfinder, then press and hold the **MENU/BRIGHT** wheel for over 2 seconds. The exposure control indicator and "L" appear. Press the **MENU/BRIGHT** wheel. "L" changes to "L" and the iris is locked. "EXP." goes out.



To Return To Automatic Iris Control . . .

.... rotate the **MENU/BRIGHT** wheel to display "AUTO" then press it in step **4**. The exposure control indicator and "L" disappear. Or, set the Power Switch to "A".

To Lock The Exposure Control And The Iris . . .

.... after step **4**, adjust the exposure rotating the **MENU/BRIGHT** wheel. Then lock the iris in step **5**. For automatic locking, rotate the **MENU/BRIGHT** wheel to select "AUTO", then press it in step **4**. The iris becomes automatic after about 2 seconds.

Iris

Like the pupil of the human eye, it contracts in well-lit environments to keep too much light from entering, and dilates in dim environments to allow in more light.

White Balance Adjustment

A term that refers to the correctness of color reproduction under various lighting. If the white balance is correct, all other colors will be accurately reproduced.
The white balance is usually adjusted automatically. However, more advanced camcorder operators control this function manually to achieve a more professional color/tint reproduction.

1. Set the Power Switch to "M" while pressing down the Lock Button located on the switch.
2. Press the **MENU/BRIGHT** wheel. The Menu Screen appears.
3. Rotate the **MENU/BRIGHT** wheel to select "W.BAL", then press it. The Menu Screen disappears and "W.BAL" and the currently selected mode are displayed.
4. Rotate the **MENU/BRIGHT** wheel to select the desired mode.
   "**AUTO**" – White balance is adjusted automatically (factory preset).
   "**☐ MAN.**" – White balance is set manually.
   "☀" – Outdoors on a sunny day.
   "☁" – Outdoors on a cloudy day.
   "✱" – A video light or similar type of lighting is used.
5. Press the **MENU/BRIGHT** wheel. Selection is complete.

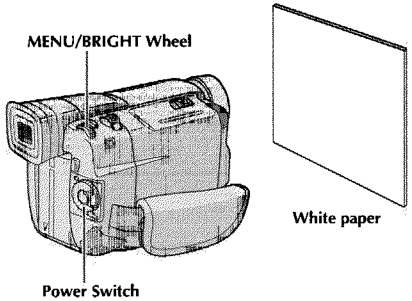
To Return To Automatic White Balance . . .
.... select "AUTO" in step **4**. Or, set the Power Switch to "A".

NOTE:
White balance cannot be used when Sepia or Monotone (☞ pg. 28) is activated.

Manual White Balance Operation

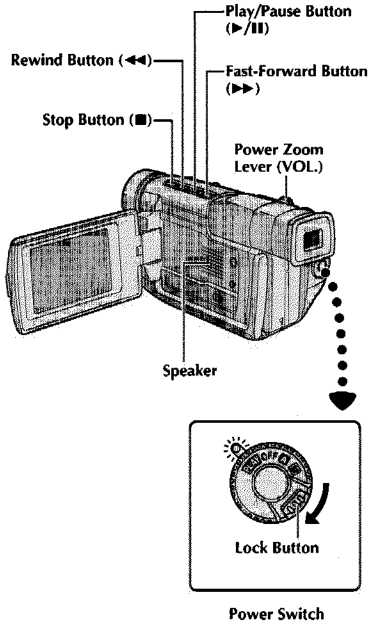
Perform Manual White Balance when shooting under various types of lighting.

1. Follow steps **1** through **4** of the white balance adjustment, and select "☐ MAN.".
2. Hold a sheet of plain white paper in front of the subject. Adjust zoom or position yourself so that the white paper fills the screen.
3. Press the **MENU/BRIGHT** wheel until ☐ begins blinking.
   When the setting is completed, ☐ stops blinking.
4. Press the **MENU/BRIGHT** wheel. Only the Manual White Balance indicator ☐ is displayed.



To Change The Tint For Recording . . .
.... in step **2**, substitute colored paper for white. The white balance is adjusted based on the color, changing the tint. Red paper = deeper green; blue paper = orange; yellow paper = deeper purple.

NOTES:
- *In step 2, it may be difficult to focus on the white paper. In such a case, adjust focus manually (☞ pg. 21).*
- *A subject can be shot under various types of lighting conditions indoors (natural, flourescent, candlelight, etc.). Because the color temperature is different depending on the light source, the subject tint will differ depending on the white balance settings. Use this function for a more natural result.*
- *Once you adjust white balance manually, the setting is retained even if the power is turned off or the battery removed.*



1. Load a tape (☞ pg. 12).
2. Set the Power Switch to "PLAY" while pressing down the Lock Button located on the switch. To start playback, press ►/II.
   - To stop playback, press ■.
   - Press ◄◄ to rewind, or ►► to fast-forward the tape during Stop mode.

To Control The Speaker Volume . . .
.... slide the Power Zoom Lever (**VOL.**) towards "+" to turn up the volume, or towards "–" to turn down the volume.

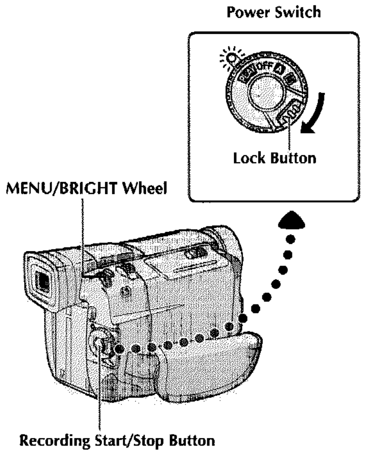
NOTES:
- *If Stop mode continues for 5 minutes when power is supplied from a battery, the camcorder shuts off automatically. To turn on again, set the Power Switch to "OFF", then to "PLAY".*
- *The playback picture can be viewed in the LCD monitor, viewfinder or on a connected TV (☞ pg. 34).*
- *You can also view the playback picture on the LCD monitor with it flipped over and pushed against the camera body.*
- *LCD monitor/viewfinder indications:*
  - *When power is supplied from a battery: the "▭" battery pack remaining power indicator is displayed. When power is supplied through the DC cord: "▭" does not appear.*
  - *During Stop mode, none of the indications are displayed.*
- *When a cable is connected to the AV connector, the sound is not heard from the speaker.*

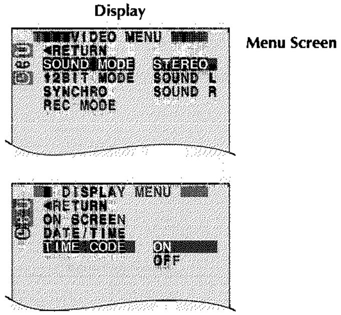
Still Playback: Pauses during playback.
1) Press ►/II during playback.
2) To resume normal playback, press ►/II again.
- *If still playback continues for more than about 3 minutes, the camcorder's Stop mode is automatically engaged. After 5 minutes in the Stop mode, the camcorder's power is automatically turned off.*
- *When ►/II is pressed, the image may not pause immediately while the camcorder stabilizes the still image.*

Shuttle Search: Allows high-speed search in either direction.
1) Press ►► for forward or ◄◄ for reverse search during playback.
2) To resume normal playback, press ►/II.
- *During playback, press and hold ◄◄ or ►►. The search continues as long as you hold the button. Once you release it, normal playback resumes.*
- *A slight mosaic effect appears on screen during Shuttle Search. This is not a malfunction.*

Frame-By-Frame Playback: Allows frame-by-frame search.
1) Engage Still Playback.
2) Rotate the **MENU/BRIGHT** wheel towards "+" for forward Frame-By-Frame Playback, or towards "–" for reverse Frame-By-Frame Playback during Still Playback.
■ To resume normal playback, press ►/II.
- *You can also use the provided remote control for Frame-By-Frame Playback (☞ pg. 42).*

Playback Zoom and Playback Special Effects
Available only with the remote control (provided) (☞ pg. 42, 43).


Power Switch
OFF
Lock Button
MENU/BRIGHT Wheel
Recording Start/Stop Button


Display
Menu Screen
VIDEO MENU
◄RETURN
SOUND MODE
12BIT MODE
SYNCHRO
REC MODE
STEREO
SOUND L
SOUND R
DISPLAY MENU
◄RETURN
ON SCREEN
DATE/TIME
TIME CODE
ON
OFF

* Each setting is linked with "DISPLAY MENU", which appears when the Power Switch is set to "M" (☞ pg. 25). The parameters are the same as in the description on pg. 25.

NOTES:
- *It is also possible to change the ON SCREEN settings by pressing **DISPLAY** on the remote control (provided).*
- *"REC MODE" can be set when the Power Switch is set to "PLAY" or "M" (☞ pg. 13, 23).*
- *If "ON SCREEN" is set to "SIMPLE", it keeps the camcorder's display (except the date, time and time code) from appearing on the connected TV. It also makes the playback sound mode and tape speed disappear on the camcorder.*

Using Menus For Detailed Adjustment

The following procedure applies to all except *Synchro Comp (☞ pg. 48, 49).*

1. Set the Power Switch to "PLAY" while pressing down the Lock Button located on the switch.
2. Press the **MENU/BRIGHT** wheel. The Menu Screen appears.
3. Rotate the **MENU/BRIGHT** wheel to select the desired function icon, and press it. The selected function menu appears.
4. Rotate the **MENU/BRIGHT** wheel to select the desired function, and press it to display the Sub Menu.
5. Rotate the **MENU/BRIGHT** wheel to select the desired parameter and press it. Selection is complete.
6. Rotate the **MENU/BRIGHT** wheel to select "◄RETURN" and press it twice to close the Menu Screen.

VIDEO MENU	SOUND MODE	☞ pg. 33.
	12BIT MODE	☞ pg. 33.
	SYNCHRO	☞ pg. 49.
	REC MODE	Allows you to set the video recording mode (SP or LP) depending on your preference (☞ pg. 13). It is recommended you use "REC MODE" in the "VIDEO MENU" when using this camcorder as a recorder during digital dubbing (☞ pg. 39).
DISPLAY MENU	ON SCREEN*	Makes the camcorder's indications appear/ disappear from the connected TV screen.
	DATE/TIME*	Makes the date/time appear/disappear on the camcorder.
	TIME CODE*	Makes the time code appear/disappear on the camcorder.

Playback Sound

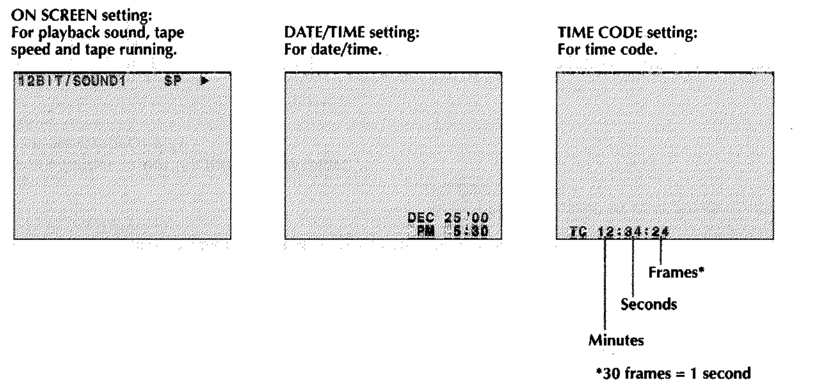
During playback, the camcorder detects the sound mode in which the recording was made, and plays the sound back. Select the type of sound to accompany your playback picture. According to the menu access explanation on pg. 32, select "SOUND MODE" or "12BIT MODE" from the Menu Screen and set it to the desired parameter.

SOUND MODE	▨ STEREO	Sound is output on both "L" and "R" channels in stereo.
	SOUND L	Sound from the "L" channel is output in stereo.
	SOUND R	Sound from the "R" channel is output in stereo.
12BIT MODE	▨ SOUND 1	Original sound is output on both "L" and "R" channels in stereo.
	SOUND 2	Dubbed sound is output on both "L" and "R" channels in stereo.
	MIX	Original and dubbed sounds are combined and output in stereo on both "L" and "R" channels in stereo.

▨ : **Factory-preset**

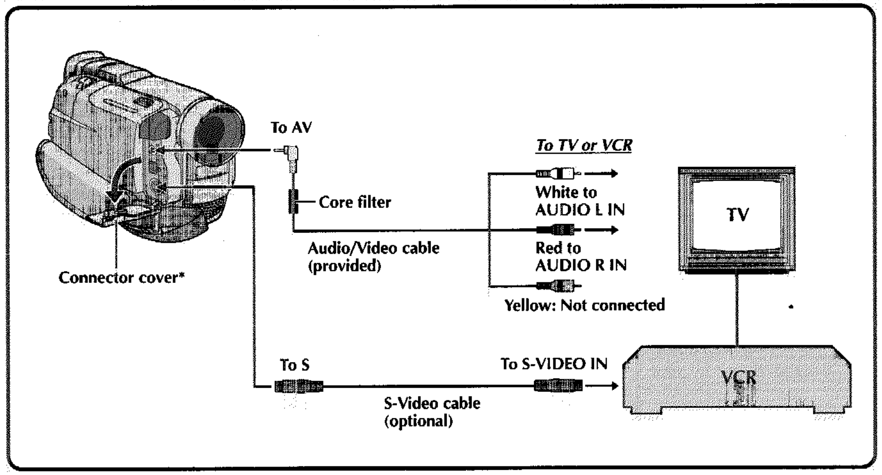
NOTES:
- *The "SOUND MODE" setting is available for both 12-bit and 16-bit sound. (In previous models' functions, "12-bit" is called "32 kHz" and "16-bit" is called "48 kHz".)*
- *The camcorder cannot detect the sound mode in which the recording was made during fast-forward or rewind. During playback the sound mode is displayed in the upper left corner.*

Display


ON SCREEN setting:
For playback sound, tape speed and tape running.
12BIT/SOUND1 SP ▶
DATE/TIME setting:
For date/time.
DEC 25 '00
PM 5:30
TIME CODE setting:
For time code.
TC 12:34:24
Frames*
Seconds
Minutes
*30 frames = 1 second

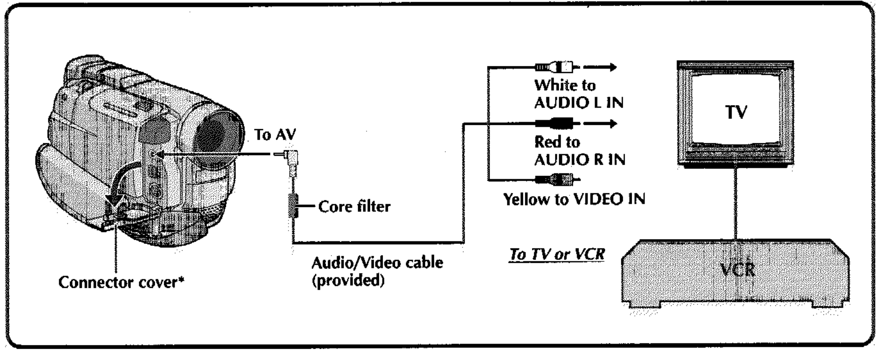
These are some basic types of connections. When making the connections, refer also to your VCR and TV instruction manuals.

A. Connection to a TV or VCR equipped with an S-VIDEO IN and A/V input connectors


To AV
Core filter
Audio/Video cable
(provided)
Connector cover*
To TV or VCR
White to
AUDIO L IN
Red to
AUDIO R IN
Yellow: Not connected
TV
To S
To S-VIDEO IN
S-Video cable
(optional)
VCR

*When connecting the cables, open this cover.

B. Connection to a TV or VCR equipped only with A/V input connectors


To AV
Core filter
Audio/Video cable
(provided)
Connector cover*
White to
AUDIO L IN
Red to
AUDIO R IN
Yellow to VIDEO IN
To TV or VCR
TV
VCR

*When connecting the cables, open this cover.

1 Make sure all units are turned off.

2 Connect the camcorder to a TV or VCR as shown in the illustration (☞ pg. 34).
If using a VCR . . . go to step 3.
If not . . . go to step 4.

3 Connect the VCR output to the TV input, referring to your VCR's instruction manual.

4 Turn on the camcorder, the VCR and the TV.

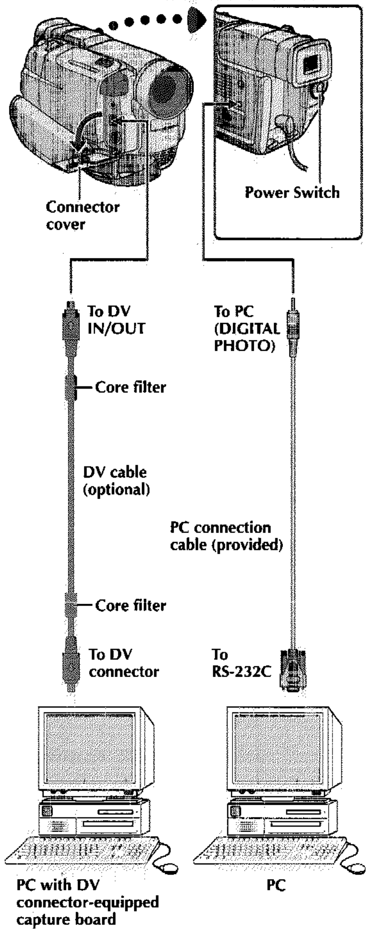
5 Set the VCR to its AUX input mode, and set the TV to its VIDEO mode.

To choose whether or not the following displays appear on the connected TV . . .

- Date/Time
  .... set "DATE/TIME" to "ON" or "OFF" in the Menu Screen (☞ pg. 32).
- Time Code
  .... set "TIME CODE" to "ON" or "OFF" in the Menu Screen (☞ pg. 32).
- Playback Sound Mode, Tape Speed And Tape Running Displays
  .... set "ON SCREEN" to "LCD" or "SIMPLE" in the Menu Screen (☞ pg. 32). Or, press **DISPLAY** on the remote control (provided).

NOTES:

- ***It is recommended to use the AC Power Adapter/Charger as the power supply instead of the battery pack (☞ pg. 9).***
- ***Use the provided Audio/Video cable, making sure to connect the end with a core filter to the camcorder. The core filter reduces interference.***
- *To monitor the picture and sound from the camcorder without inserting a tape, set the camcorder's Power Switch to "A" or "M", then set your TV to the appropriate input mode.*
- *Make sure you adjust the TV sound volume to its minimum level to avoid a sudden burst of sound when the camcorder is turned on.*
- *If you have a TV or speakers that are not specially shielded, do not place the speakers adjacent to the TV as interference will occur in the camcorder playback picture.*


Connector cover
Power Switch
To DV IN/OUT
To PC (DIGITAL PHOTO)
Core filter
DV cable (optional)
PC connection cable (provided)
Core filter
To DV connector
To RS-232C
PC with DV connector-equipped capture board
PC

Connection To A Personal Computer

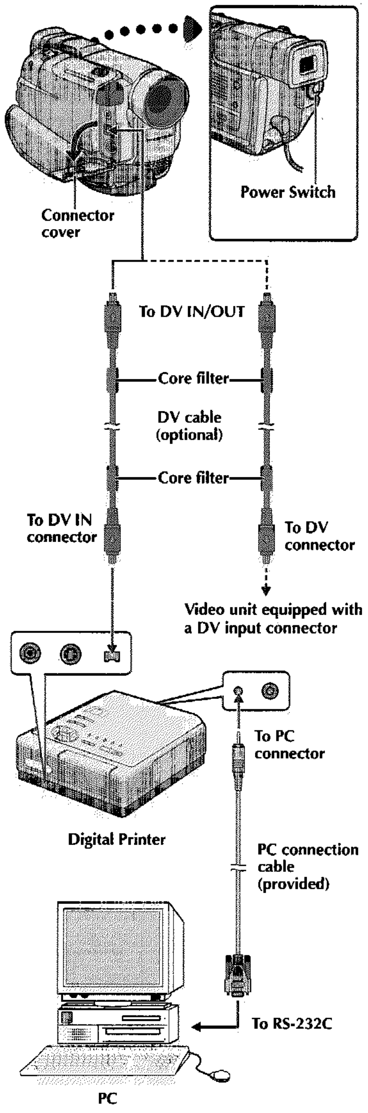
This camcorder can transfer still images to a PC by using the provided software when connected as shown in the illustration. It is also possible to transfer still images to a PC with a DV connector-equipped capture board installed.

1 Make sure the camcorder and PC are turned off.

2 Connect the camcorder to your PC using the appropriate cable as shown in the illustration.

3 Turn the camcorder's Power Switch to "PLAY" while pressing down the Lock Button located on the switch and turn on the PC.

NOTES:
- ***It is recommended to use the AC Power Adapter/ Charger as the power supply instead of the battery pack (☞ pg. 9).***
- ***Never connect the PC connection cable and the DV cable simultaneously to the camcorder. Connect only the cable you wish to use to the camcorder.***
- *The date/time information cannot be captured into the PC.*
- *Refer to the instruction manuals of the provided Software.*
- *Also refer to the manufacturer's instruction manual for the DV connector-equipped capture board.*
- ***When using a DV cable, be sure it has a core filter attached. The core filter reduces interference.***


Connector cover
Power Switch
To DV IN/OUT
Core filter
DV cable (optional)
Core filter
To DV IN connector
To DV connector
Video unit equipped with a DV input connector
To PC connector
Digital Printer
PC connection cable (provided)
To RS-232C
PC

Connection To A Video Unit Equipped With A DV Connector

Connection to the GV-DT3 Digital Printer (optional) allows you to print out images or transfer them to a PC. It is also possible to copy recorded scenes from the camcorder onto another video unit equipped with a DV connector. This function is called Digital Dubbing (☞ pg. 39), which offers virtually no image or sound deterioration.

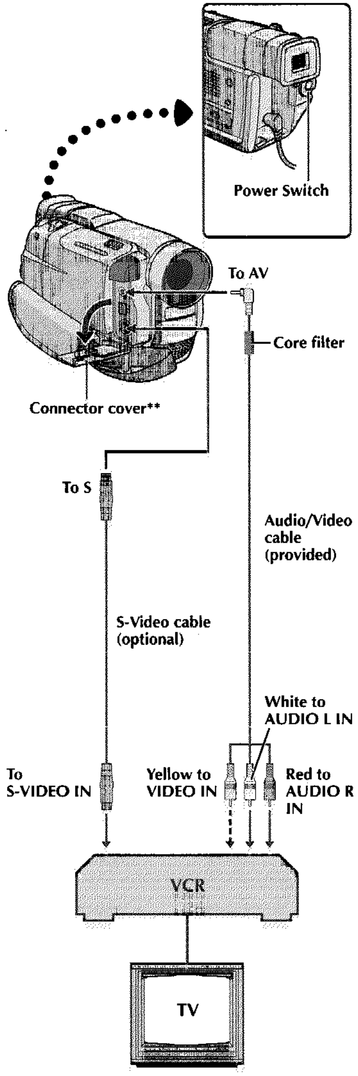
1 Make sure all units are turned off.

2 Make connections to the device you want to connect to using a DV cable, as shown in the illustration.

3 If necessary, connect the PC connection cable (provided) to the printer's PC connector and the PC's RS-232C connector.

4 Turn the camcorder's Power Switch to "PLAY" while pressing down the Lock Button located on the switch and turn on the other units.

NOTES:
- ***It is recommended to use the AC Power Adapter/ Charger as the power supply instead of the battery pack (☞ pg. 9).***
- *For Digital Dubbing, this camcorder can be connected only to one device at a time. This camcorder can also be used as a recorder (☞ pg. 39).*
- *If Still Playback, Slow-Motion Playback, Fast-Forward or Rewind is attempted with the camcorder connected to a video unit via the DV connector, the image will take on an effect similar to a colored mosaic pattern or it will become black.*
- *Also refer to the instruction manuals of the connected units.*
- ***When using a DV cable, be sure it has a core filter attached. The core filter reduces interference.***



Dubbing To A VCR

1 Following the illustration, connect the camcorder and the VCR. Also refer to pg. 34 and 35.

2 Set the camcorder's Power Switch to "PLAY" while pressing down the Lock Button located on the switch, turn on the VCR's power, and insert the appropriate cassettes in the camcorder and the VCR.

3 Engage the VCR's AUX and Record-Pause modes.

4 Engage the camcorder's Play mode to find a spot just before the edit-in point. Once it is reached, press ►/❚❚ on the camcorder.

5 Press ►/❚❚ on the camcorder and engage the VCR's Record mode.

6 Engage the VCR's Record-Pause mode and press ►/❚❚ on the camcorder.

7 Repeat steps **4** through **6** for additional editing, then stop the VCR and camcorder when finished.

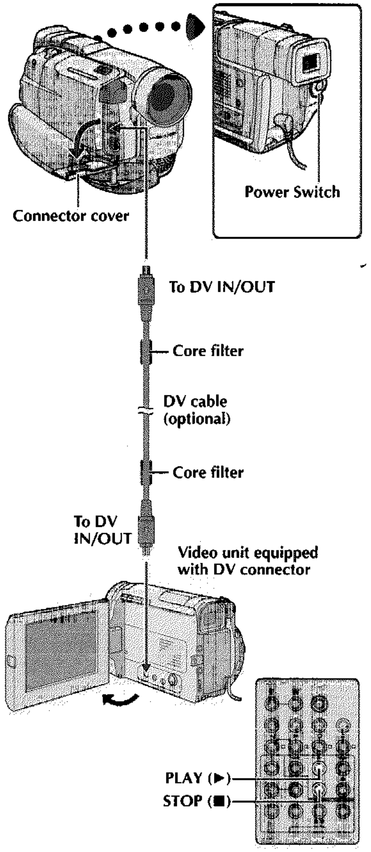
NOTES:

- ***Use the provided Audio/Video cable, making sure to connect the end with a core filter to the camcorder. The core filter reduces interference.***
- *You can use Playback Zoom (☞ pg. 42) or Playback Special Effects (☞ pg. 43) in step 5.*
- *Before you start dubbing, make sure that the indications do not appear on the connected TV. If they do, they are being recorded onto the new tape.*

To choose whether or not the following displays appear on the connected TV . . .

- Date/Time
  .... set "DATE/TIME" to "ON" or "OFF" in the Menu Screen (☞ pg. 32).
- Time Code
  .... set "TIME CODE" to "ON" or "OFF" in the Menu Screen (☞ pg. 32).
- Playback Sound Mode, Tape Speed And Tape Running Displays
  .... set "ON SCREEN" to "LCD" or "SIMPLE" in the Menu Screen (☞ pg. 32). Or, press **DISPLAY** on the remote control.

* Connect when an S-Video cable is not used.
** When connecting the cables, open this cover.



Dubbing To Or From A Video Unit Equipped With A DV Connector (Digital Dubbing)

It is also possible to copy recorded scenes from the camcorder onto another video unit equipped with a DV connector. Since a digital signal is sent, there is little if any image or sound deterioration.

[To use this camcorder as a player]

1 Make sure the camcorder's power is off.

2 Connect the camcorder to your video unit equipped with a DV connector using a DV cable as shown in the illustration.

3 Press ► to play back the source tape.

4 While watching the playback on the monitor, engage the DV connector-equipped video unit's record mode from the spot on the source tape you want to begin recording.

NOTES:

- ***It is recommended to use the AC Power Adapter/Charger as the power supply instead of the battery pack (☞ pg. 9).***
- *If the remote control is used when both the player and recorder are JVC video units, both units will perform the same operation. To prevent this from happening, press the buttons on both units.*
- *For Digital Dubbing, this camcorder can be connected only to one device at a time. This camcorder can also be used as a recorder.*
- *If a blank portion or disturbed image is played back on the player during dubbing, the dubbing may stop so that an unusual image is not dubbed.*
- *Even though the DV cable is connected correctly, sometimes the image may not appear in step 3. If this occurs, turn off the power and make connections again.*
- *If "Playback Zoom" (☞ pg. 42), "Playback Special Effects" (☞ pg. 43) or "Snapshot" is attempted during playback, only the original playback image recorded on the tape is output from the DV IN/OUT connector.*
- ***When using a DV cable, be sure it has a core filter attached. The core filter reduces interference.***

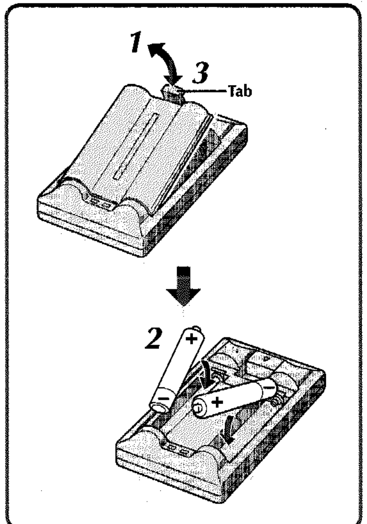
To Use This Camcorder As A Recorder . . .

1. Turn the Power Switch to "PLAY" while pressing down the Lock Button located on the switch.
2. Set "REC MODE" to "SP" or "LP" in the Menu Screen (☞ pg. 32)
3. Connect the DV cable as shown in the illustration and load a cassette to record on.
4. Press the Recording Start/Stop button to engage the Record-Pause mode. "DV. IN" appears on the screen.
5. Press the Recording Start/Stop button to start recording. "DV. IN" changes to "DV.IN".
6. Press the Recording Start/Stop button again to engage the Record-Pause mode. "DV.IN" returns to "DV. IN".

NOTES:

- *Digital Dubbing is performed in the sound mode recorded on the original tape, regardless of the current "SOUND MODE" setting (☞ pg. 23).*
- *During Digital Dubbing, no signals are output from the video or audio connectors.*

USING THE REMOTE CONTROL UNIT

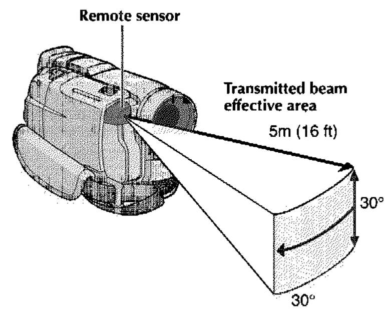


The Full-Function Remote Control Unit can operate this camcorder from a distance as well as the basic operations (Playback, Stop, Pause, Fast-Forward and Rewind) of your VCR. It also makes additional playback functions possible.

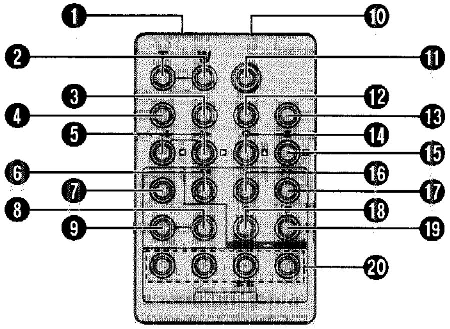
Installing The Batteries

The remote control uses two "AAA (R03)" size batteries. See "General Battery Precautions" (☞ pg. 64).

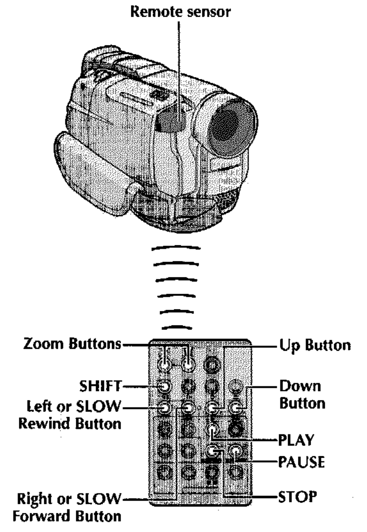
1. Remove the battery compartment cover while pushing up the tab as illustrated.
2. Insert two "AAA (R03)" size batteries in the correct direction.
3. Re-attach the battery compartment cover.

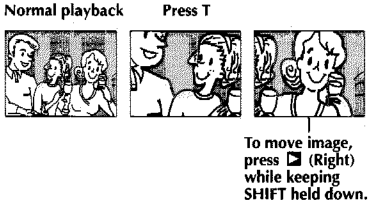


When using the remote control, be sure to point it at the remote sensor. The illustration shows the approximate transmitted beam effective area for indoor use.
The transmitted beam may not be effective or may cause incorrect operation outdoors or when the remote sensor is directly exposed to sunlight or powerful lighting.



Buttons	Functions	
	With the camcorder's Power Switch set to the camera position ("A" or "M").	**With the camcorder's Power Switch set to "PLAY".**
① Infrared beam transmitting window	Transmits the beam signal.	
② Zoom (T/W) Buttons	Zoom in/out (☞ pg. 18)	Zoom in/out (☞ pg. 42)
③ DISPLAY Button	—	☞ pg. 35, 38, 45
④ SHIFT Button	—	☞ pg. 42, 44
⑤ SLOW Rewind/Forward Buttons **Left/Right Buttons**	— —	☞ pg. 42 ☞ pg. 42
⑥ REW Button	—	Rewind, Reverse Shuttle Search (☞ pg. 31)
⑦ FADE/WIPE Button	—	☞ pg. 46
⑧ EFFECT ON/OFF Button	—	☞ pg. 43
⑨ EFFECT Button	—	☞ pg. 43
⑩ PAUSE IN Connector	—	☞ pg. 45
⑪ START/STOP Button	Functions the same as the Recording Start/Stop Button on the camcorder.	
⑫ MBR SET Button	—	☞ pg. 44
⑬ SNAPSHOT Button	Functions the same as **SNAPSHOT** on the camcorder.	
⑭ Up Button **INSERT Button**	— —	☞ pg. 42 ☞ pg. 51
⑮ Down Button **A. DUB Button**	— —	☞ pg. 42 ☞ pg. 50
⑯ PLAY Button	—	Playback start (☞ pg. 31)
⑰ FF Button	—	Forward, Forward Shuttle Search (☞ pg. 31)
⑱ STOP Button	—	Stop (☞ pg. 31)
⑲ PAUSE Button	—	Pause (☞ pg. 42)
⑳ R.A.EDIT Buttons	—	☞ pg. 44 – 49




Normal playback
Press T
To move image, press ▶ (Right) while keeping SHIFT held down.

FEATURE: Slow-Motion Playback

PURPOSE:
To allow slow-speed search in either direction during playback.

OPERATION:
1) To change from normal to Slow-Motion Playback, press **PAUSE** (**II**) to engage Still Playback then press **SLOW** (◀I or I▶) more than approx. 2 seconds. After approx. 1 minute in Slow Rewind or approx. 2 minutes in Slow Forward, normal playback resumes.

■ To stop Slow-Motion Playback, press **PLAY** (▶).

NOTES:
- *During Slow-Motion Playback, due to digital image processing, the picture may take on a mosaic effect.*
- *After **SLOW** (◀I or I▶) is pressed and held, the still image may be displayed for a few seconds, followed by a blue screen for a few seconds. This is not a malfunction.*
- *There may be a small margin between the slow-motion playback start point you chose and the actual start point for Slow-Motion Playback.*
- *During Slow-Motion Playback, there will be disturbances in video and the picture may seem unstable, especially with steady images. This is not a malfunction.*
- *During Slow-Motion Playback, press **PAUSE** (**II**) to pause playback.*

FEATURE: Frame-By-Frame Playback

PURPOSE:
To allow frame-by-frame search during playback.

OPERATION:
1) To change from normal to Frame-By-Frame Playback, press **PAUSE** (**II**) to engage Still Playback then press **SLOW** (I▶) repeatedly for forward or **SLOW** (◀I) repeatedly for reverse. Each time it is pressed, the frame is played back.

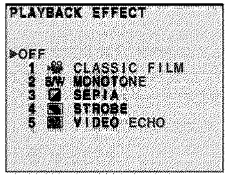
FEATURE: Playback Zoom

PURPOSE:
To magnify the recorded image up to 25X at any time during playback.

OPERATION:
1) Press **PLAY** (▶) to find the scene of interest.
2) Press the Zoom Buttons (**T/W**) on the remote control. Make sure the remote control is pointed at the camcorder's remote sensor. Pressing **T** zooms in.
3) You can move the image on screen around to find a particular portion of the picture. While holding down **SHIFT**, press ◀ (**Left**), ▶ (**Right**), ▲ (**Up**) and ▼ (**Down**).

■ To end zoom, press and hold **W** until magnification returns to normal. Or, press **STOP** (■) and then press **PLAY** (▶).

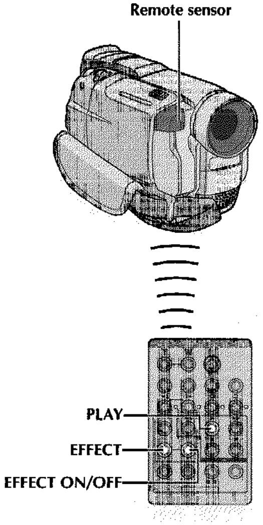
NOTES:
- *Zoom can also be used during slow-motion and still playback.*
- *Due to digital image processing, the quality of the image may suffer.*



PLAYBACK EFFECT

▶OFF
1 CLASSIC FILM
2 B/W MONOTONE
3 SEPIA
4 STROBE
5 VIDEO ECHO

PLAYBACK EFFECT Select Menu



FEATURE: Playback Special Effects

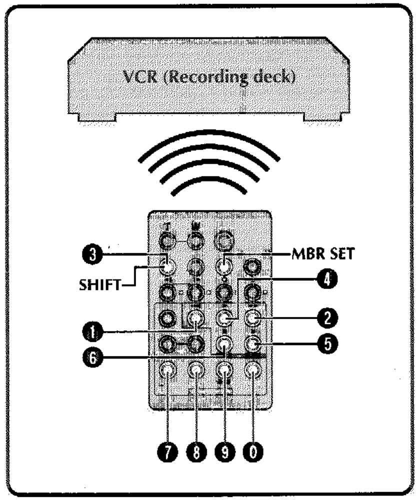
PURPOSE:
To allow you to add creative effects to the playback image.

OPERATION:
1) To start playback, press **PLAY** (▶).
2) Point the remote control at the camcorder's remote sensor and press **EFFECT**. The PLAYBACK EFFECT Select Menu appears.
3) Move the highlight bar to the desired effect by pressing **EFFECT**. The selected function is activated and after 2 seconds the menu disappears.

■ To deactivate the selected effect, press **EFFECT ON/OFF** on the remote control. Pressing it again re-activates the selected effect.

■ To change the selected effect, repeat from step **2** above.

NOTES:
- *When some Playback Special Effects are used, the Multi-Analyzer 4 and Multi-Analyzer 9 Snapshot modes (☞ pg. 17) are not available.*
- *The effects that can be used during playback are Classic Film, Monotone, Sepia, Strobe and Video Echo. The effects work the same in playback as they did in recording. Refer to page 28 for more information.*



VCR CODE LIST

VCR BRAND NAME	BUTTONS (A) (B)
GE	❶ ❶ ❾ ❷ ❾ ⓿ ❾ ❹
HITACHI	❻ ❻ ❻ ❸
JVC A B C	❾ ❶ ❾ ❻ ❾ ❸
MAGNAVOX	❾ ❺ ❶ ❶ ❼ ❶ ❼ ❻
MITSUBISHI	❻ ❼ ❻ ❽
NEC	❸ ❼ ❸ ❽
PHILIPS	❶ ❾ ❾ ❺ ❶ ❶ ❾ ❹ ❾ ❶ ❾ ❻ ❶ ❷
PHILIPS	❸ ❸ ❼ ❷
PANASONIC	❶ ❸ ❶ ❼ ❶ ❶ ❾ ❹ ❶ ❽
RCA	❾ ❷ ❾ ❹ ❻ ❻ ❻ ❸ ❾ ⓿
SANYO	❸ ❻ ❸ ❺
SHARP	❶ ❺ ❶ ⓿
SONY	❻ ❺ ❻ ⓿ ❸ ❾ ❸ ❶
TOSHIBA	❻ ❾ ❻ ❶
ZENITH	❶ ❻

Random Assemble Editing [R.A.Edit]

Create edited videos easily using your camcorder as the source player. You can select up to 8 "cuts" for automatic editing, in any order you like. R.A.Edit is more easily performed when the MBR (Multi-Brand Remote) is set to operate with your brand of VCR (see VCR CODE LIST), but can also be performed by operating the VCR manually.
Before operation, make sure the batteries are installed in the remote control (☞ pg. 40).

SET REMOTE/VCR CODE

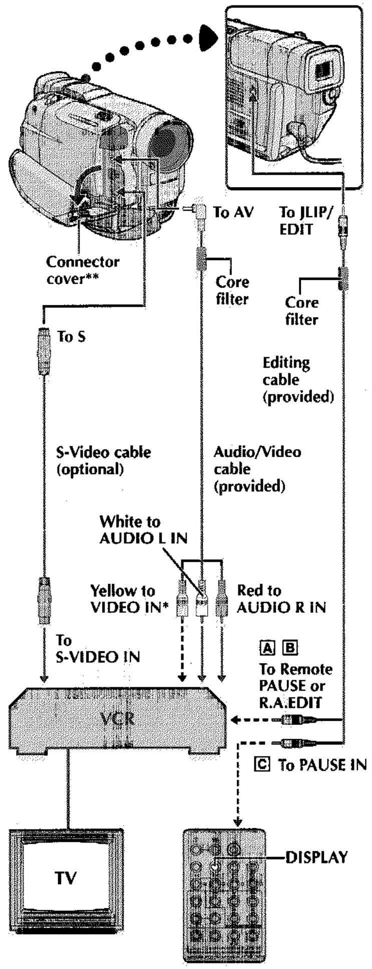
1 Turn off the power to the VCR and point the remote towards the VCR's infrared sensor. Then, referring to the VCR CODE LIST, press and hold **MBR SET**, and press button (A) and then (B). The code is automatically set once you release **MBR SET**, and the VCR's power comes on.

2 Make sure the VCR's power is on. Then, while holding **SHIFT**, press the button on the remote for the desired function. The functions the remote can control are PLAY, STOP, PAUSE, FF, REW and VCR REC STBY (you do not need to press **SHIFT** for this one).

You are now ready to try Random Assemble Editing.

IMPORTANT
Although the MBR is compatible with JVC VCRs and those of many other makers, it may not work with yours or may offer limited functions.

NOTES:
- *If the VCR's power does not come on in step **1**, try another code from the VCR CODE LIST.*
- *Some brands of VCR do not come on automatically. In this case, turn the power on manually and try step **2**.*
- *If the remote control is not able to control the VCR, use the controls on the VCR.*
- *When the remote control's batteries run out, the VCR brand you have set will be erased. In that case, replace the old battery with a new one to reset the VCR brand.*



* Connect when an S-Video cable is not used.
** When connecting cables, open this cover.

ATTENTION FOR EDITING CABLE
Make sure you connect the end with the core filter (plug which has 3 rings around the pin) to the camcorder.

MAKE CONNECTIONS

Also refer to pg. 34 and 35.

1 **A A JVC VCR equipped with a remote pause connector . . .**
... connect the editing cable to the Remote PAUSE connector.
B A JVC VCR not equipped with a remote pause connector but equipped with an R.A. EDIT connector . . .
... connect the editing cable to the R.A.EDIT connector.
C A VCR other than above . . .
... connect the editing cable to the remote control's PAUSE IN connector.

2 Insert a recorded tape into the camcorder. Set the Power Switch to "PLAY" while pressing down the Lock Button located on the switch.

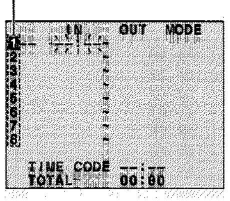
3 Turn the VCR power on, insert a recordable tape and engage the AUX mode (refer to the VCR's instructions).

NOTES:
- *Before Random Assemble Editing, make sure the indications do not appear on the TV monitor. If they do, they will be recorded onto the new tape.*

To choose whether or not the following displays appear on the connected TV . . .
- Date/Time
.... set "DATE/TIME" to "ON" or "OFF" in the Menu Screen (☞ pg. 32).
- Time Code
.... set "TIME CODE" to "ON" or "OFF" in the Menu Screen (☞ pg. 32).
- Playback Sound Mode, Tape Speed And Tape Running Displays
.... set "ON SCREEN" to "LCD" or "SIMPLE" in the Menu Screen (☞ pg. 32). Or, press **DISPLAY** on the remote control.
- ***Use the provided cables, making sure to connect the end with a core filter to the camcorder. The core filter reduces interference.***
- *When editing on a VCR equipped with a DV input connector, an optional DV cable can be connected instead of an S-Video cable and audio/video cable.*

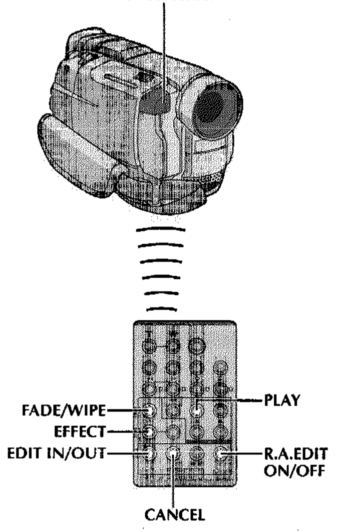
CONTINUED ON NEXT PAGE

Program



Random Assemble Editing Menu

Remote sensor



SELECT SCENES

4 Point the remote control at the camcorder's remote sensor. Press **PLAY** (▶) and then press **R.A.EDIT ON/OFF** on the remote control.
The Random Assemble Editing Menu appears.

5 If using a Fade/Wipe at the beginning of the scene, press **FADE/WIPE** on the remote control.
- Cycle through the effects by pressing repeatedly, and stop when the one you want is displayed.
- You cannot use a Picture Wipe/Dissolve at the beginning of Program 1.

6 At the beginning of the scene, press **EDIT IN/OUT** on the remote control. The Edit-In position appears in the Random Assemble Editing Menu.

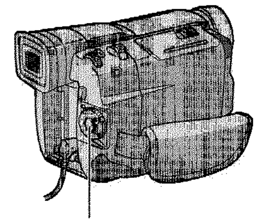
7 At the end of the scene, press **EDIT IN/OUT**. The Edit-Out position appears in the Random Assemble Editing Menu.

8 If using a Fade/Wipe at the end of the scene, press **FADE/WIPE**.
- Cycle through the effects by pressing repeatedly, and stop when the one you want is displayed.
- If you select a Fade/Wipe effect for an Edit-Out point, the effect is automatically applied to the following Edit-In point.
- You cannot use a Picture Wipe/Dissolve at the end of the last scene.
- When you use Fade/Wipe effects, that time is included in the total time (this does not apply to Picture Wipe/Dissolve).

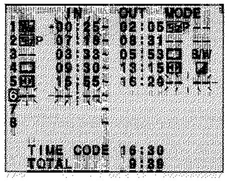
9 If using Playback Special Effects, press **EFFECT** (☞ pg. 43).

10 Repeat steps **6** through **9** to register additional scenes.
- To change previously registered points, press **CANCEL** on the remote control. The registered points disappear, one at a time, from the most recently registered point.
- If you are not using Fade/Wipe or Program AE with special effects, repeat steps **6** and **7** only.

NOTES:
- *When choosing a scene, set Edit-In and Edit-Out points so that there is a relatively large difference between them.*
- *If the search time for an in-point exceeds 5 minutes, the recording deck's Record-Standby mode will be canceled and editing will not take place.*
- *If there are blank portions before or after the Edit-In and Edit-Out points, a blue screen may be included in the edited version.*
- *Since time codes register time only as accurately as seconds, the time code total time may not match the total program time exactly.*
- *Turning off the camcorder's power erases all registered Edit-In and Edit-Out points.*
- *If you select Sepia or Monotone mode from Program AE with special effects, you cannot use the Dissolve or Black & White Fader. In this case the Dissolve or Black & White indicator begins blinking. Once the next Edit-In point is registered, the effect is turned off. To combine these effects, use Sepia or Monotone during recording, then use the Dissolve or Black & White Fader during Random Assemble Editing.*
- *It is not possible to use Fade/Wipe effects and Program AE with special effects during Random Assemble Editing using a DV cable.*

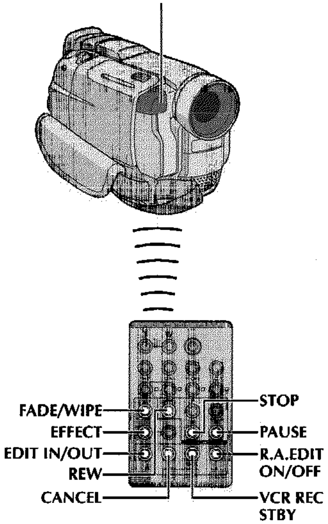


Recording Start/Stop Button



Random Assemble Editing Menu

Remote Sensor



AUTOMATIC EDITING TO VCR

11 Rewind the tape in the camcorder to the beginning of the scene you want to edit and press **PAUSE** (II).

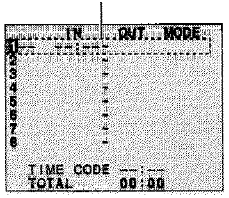
12 Point the remote control towards the VCR's remote sensor and press **VCR REC STBY** (●II), or manually engage the VCR's Record-Pause mode.

13 Press the Recording Start/Stop Button on the camcorder. Editing proceeds as programed, right through to the end of the last registered scene.
- Pressing **START/STOP** on the remote control does not start editing.
- When dubbing is complete, the camcorder enters the Pause mode, and the VCR enters its Record-Pause mode.
- If you do not register an Edit-Out point, the tape will be dubbed all the way to the end automatically.
- If you operate the camcorder during automatic editing, the VCR will enter its Record-Pause mode and automatic editing will stop.

14 Engage the Stop modes for the camcorder and the VCR.
To make the R.A.Edit counter display disappear, press **R.A.EDIT ON/OFF** on the remote control.

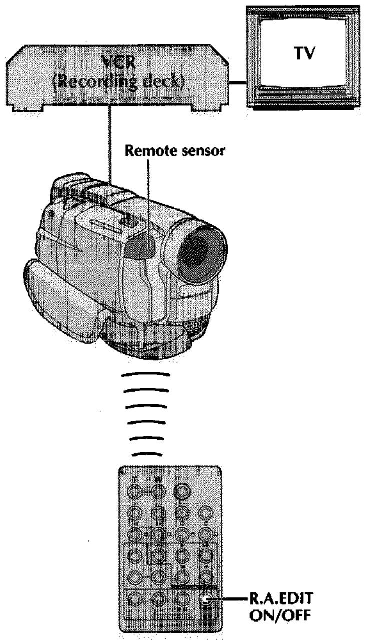
NOTES:
- *Pressing **R.A.EDIT ON/OFF** on the remote control clears all settings registered during Random Assemble Editing.*
- *When the editing cable is connected to the remote control's Pause In connector during dubbing, make sure the remote control is pointed at the VCR's sensor, and the path between the two is unobstructed.*
- *Random Assemble Editing may not function properly when using a tape including several duplicated time codes (☞ pg. 19).*

Program 1



```
   IN    OUT   MODE
1
2
3
4
5
6
7
8
TIME CODE --:--
TOTAL     00:00
```

Random Assemble Editing Menu



For More Accurate Editing

Some VCRs make the transition from Record-Pause to Record mode faster than others. Even if you begin editing for the camcorder and the VCR at exactly the same time, you may lose scenes you wanted, or find that you have recorded scenes you did not want. For a cleanly edited tape, confirm and adjust the timing of the camcorder against your VCR.

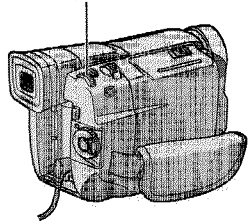
DIAGNOSING VCR/CAMCORDER TIMING

1 Play back the tape in the camcorder, then point the remote control at the camcorder's remote sensor and press **R.A.EDIT ON/OFF**.
The Random Assemble Editing Menu appears.

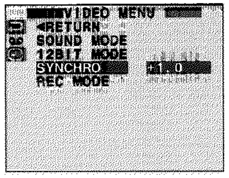
2 Perform Random Assemble Editing on Program 1 only. In order to check VCR and camcorder timing, select the beginning of a scene transition as your Edit-In point.

3 Play back the dubbed scene.
- If any images from the scene prior to the transition you chose for your Edit-In point were recorded, that means your VCR moves too quickly from Record-Pause to Record mode.
- If the scene you tried to dub starts in progress, the VCR is slow to start recording.

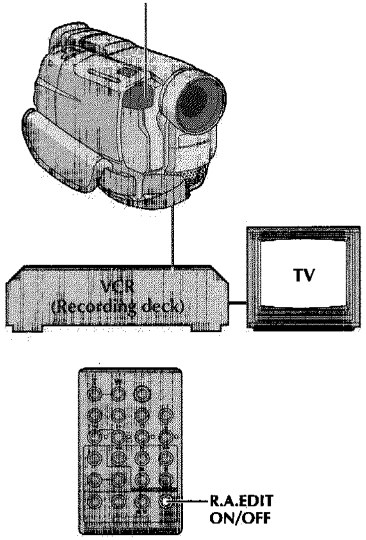
MENU/BRIGHT Dial



Display



```
VIDEO MENU
◄RETURN
SOUND MODE
12BIT MODE
SYNCHRO        +1.0
REC MODE
```



ADJUSTMENT OF VCR/CAMCORDER TIMING

4 Point the remote control at the camcorder's remote sensor and press **R.A.EDIT ON/OFF** to make the Random Assemble Editing menu disappear, then press the **MENU/BRIGHT** wheel. The Menu Screen appears.

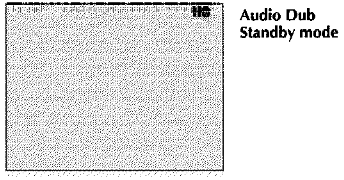
5 Rotate the **MENU/BRIGHT** wheel to select "▣" and press it. "VIDEO MENU" appears. Then, rotate it to "SYNCHRO" and press it. The value for "SYNCHRO" is highlighted.

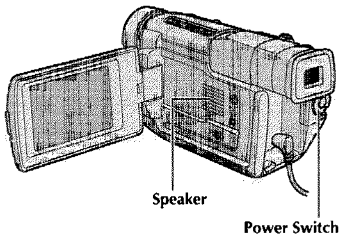
6 Based on the diagnostics performed (☞ pg. 48), you can now advance the VCR's record timing by rotating the **MENU/BRIGHT** wheel towards "+". You can also delay the VCR's record timing by rotating the **MENU/BRIGHT** wheel towards "–". The adjustment range is from –1.3 to +1.3 seconds, in 0.1-second increments. Press the **MENU/BRIGHT** wheel to finish the setting.

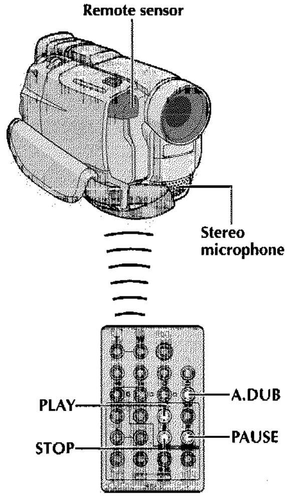
7 Rotate the **MENU/BRIGHT** wheel to select "◄RETURN" and press it twice.
Now perform Random Assemble Editing beginning with step **4** on page 46.

NOTES:
- *Before performing actual Random Assemble Editing, do a few Random Assemble Editing trial runs to check whether the value you have input is appropriate or not, and make adjustments accordingly.*
- *Depending on the recorder, there may be situations where the timing difference cannot be fully corrected.*

Display







Audio Dubbing

The audio track can be customized only when recorded in the 12-bit mode (☞ pg. 23).

NOTES:

- *Audio Dubbing is not possible on a tape recorded in 16-bit audio, on a tape recorded in the LP mode or on a blank portion of a tape.*
- *To perform Audio Dubbing while watching on the television, make connections (☞ pg. 34).*

1 Play back the tape to locate the point where editing will start, then press **PAUSE (▮▮)**.

2 While holding **A.DUB (●)** on the remote control, press **PAUSE (▮▮)**. "▮▮●" appears.

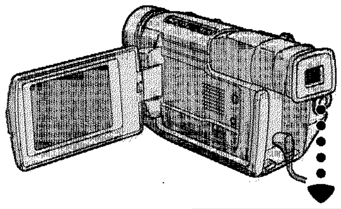
3 Press **PLAY (▶)**, then begin "narrating". Speak into the microphone.
- To pause dubbing, press **PAUSE (▮▮)**.

4 To end Audio Dubbing, press **PAUSE (▮▮)**, then **STOP (■)**.

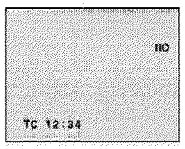
To hear the dubbed sound during playback . . .
.... set "12BIT MODE" to "SOUND 2" or "MIX" in the Menu Screen (☞ pg. 32, 33).

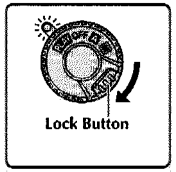
NOTES:

- *Sound is not heard from the speaker during Audio Dubbing.*
- *When editing onto a tape that was recorded at 12-bit, the old and new soundtracks are recorded separately.*
- *If you dub onto a blank space on the tape, the sound may be disrupted. Make sure you only edit recorded areas.*
- *If feedback or howling occurs during TV playback, move the camcorder's microphone away from the TV, or turn down the TV's volume.*
- *If you change from 12-bit to 16-bit in mid-recording and then use the tape for Audio Dubbing, it is not effective from the point where 16-bit recording began.*
- *During Audio Dubbing, when the tape moves to scenes recorded in the LP mode, scenes recorded in 16-bit audio or a blank portion, Audio Dubbing stops (☞ pg. 61).*

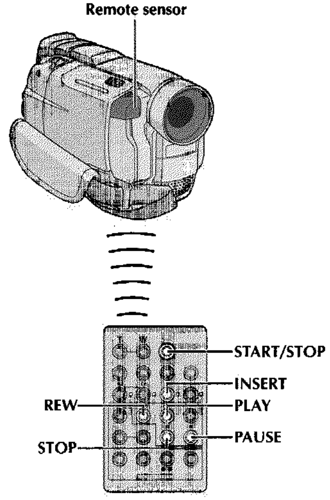


Display





Power Switch



Insert Editing

You can record a new scene into a previously recorded tape, replacing a section of the original recording with minimal picture distortion at the in and outpoints. The original audio remains unchanged.

NOTES:

- *Before performing the following steps, make sure that "TIME CODE" is set to "ON" in the Menu Screen (☞ pg. 32).*
- *Insert Editing is not possible on a tape recorded in the LP mode or on a blank portion of a tape.*
- *To perform Insert Editing while watching in the television, make connections (☞ pg. 34).*

1 Play back the tape, locate the Edit-Out point and press **PAUSE (▮▮)**. Confirm the time code at this point (☞ pg. 33).

2 Press **REW (◀◀)** until the Edit-In point is located, then press **PAUSE (▮▮)**.

3 Press and hold **INSERT (○)** on the remote control, then press **PAUSE (▮▮)**. "▮▮○" and the Time Code (min.:sec.) appear and the camcorder enters Insert-Pause mode.

4 Press **START/STOP** to begin editing.
- Confirm the insert at the time code you checked in step **1**.
- To pause editing, press **START/STOP**. Press it again to resume editing.

5 To end Insert Editing, press **START/STOP**, then **STOP (■)**.

NOTES:

- *Program AE with special effects (☞ pg. 28) can be used to spice up the scenes being edited during Insert Editing.*
- *During Insert Editing, the date and time information changes.*
- *If you perform Insert Editing onto a blank space on the tape, the audio and video may be disrupted. Make sure you only edit recorded areas.*
- *During Insert Editing, when the tape moves to scenes recorded in the LP mode or a blank portion, Insert Edting stops (☞ pg. 61).*

TROUBLESHOOTING

If, after following the steps in the chart below, the problem still exists, please consult your nearest JVC dealer.

The camcorder is a microcomputer-controlled device. External noise and interference (from a TV, a radio, etc.) might prevent it from functioning properly. In such cases, first disconnect its power supply unit (battery pack, AC Power Adapter/Battery Charger, etc.) and wait a few minutes; and then re-connect it and proceed as usual from the beginning.

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
1. No power is supplied.	*1.* • The power is not connected properly. • The battery is dead.	*1.* • Connect the AC Power Adapter/Charger securely (☞ pg. 9). • Replace the dead battery with a fully charged one (☞ pg. 8, 9).
2. "SET DATE/TIME!" appears.	*2.* • The date/time is not set. • The built-in clock battery has run out and the previously set date/time has been erased.	*2.* • Set the date/time (☞ pg. 11). • Consult your nearest JVC dealer for replacement.
3. Recording cannot be performed.	*3.* • The tape's erase protection tab is set to "SAVE". • The Power Switch is set to "PLAY" or "OFF". • "TAPE END" appears. • The cassette holder cover is open.	*3.* • Set the tape's erase protection tab to "REC" (☞ pg. 12). • Set the Power Switch to "A" or "M" (☞ pg. 15). • Replace with new cassette (☞ pg. 12). • Close the cassette holder cover.
4. There is no picture.	*4.* • The camcorder is not getting power, or some other malfunction exists.	*4.* • Turn the camcorder's power off and on again (☞ pg. 14).
5. Some functions are not available using the **MENU/ BRIGHT** wheel.	*5.* • The Power Switch is set to "A".	*5.* • Set the Power Switch to "M" (☞ pg. 15).
6. The focus does not adjust automatically.	*6.* • Focus is set to the Manual mode. • The recording was done in a dark place, or the contrast was low. • The lens is dirty or covered with condensation.	*6.* • Set Focus to the Auto mode (☞ pg. 21). • Clean the lens and check the focus again (☞ pg. 58).
7. The cassette will not load properly.	*7.* • The cassette is in the wrong position. • The battery's charge is low.	*7.* • Set it in the right position (☞ pg. 12). • Install a fully charged battery (☞ pg. 8, 9).
8. Snapshot mode cannot be used.	*8.* • The Squeeze mode is selected.	*8.* • Disengage the Squeeze mode (☞ pg. 24).
9. The color of Snapshot looks strange.	*9.* • The light source or the subject does not include white. Or there are various different light sources behind the subject.	*9.* • Find a white subject and compose your shot so that it also appears in the frame (☞ pg. 16).
10. The image taken using Snapshot is too dark.	*10.* • Shooting was performed under backlit conditions.	*10.* • Press the **BACKLIGHT** Button (☞ pg. 29).
11. Digital Zoom does not work.	*11.* • 10X optical zoom is selected. • "P.AE/EFFECT" is set to "VIDEO ECHO" in the Menu Screen. • Picture Wipe or Dissolve are being used in a scene transition.	*11.* • Set "ZOOM" to "40X" or "250X" in the Menu Screen (☞ pg. 23). • Disengage the "VIDEO ECHO" mode (☞ pg. 18, 28). • Wait until the Picture Wipe or Dissolve effects are completed (☞ pg. 18, 26).
12. Program AE with special effects and Fade/Wipe Effects do not work.	*12.* • The Power Switch is set to "A".	*12.* • Set the Power Switch to "M" (☞ pg. 26, 28).
13. The Black & White Fader does not work.	*13.* • The Sepia or Monotone mode is activated.	*13.* • Turn off Sepia and Monotone (☞ pg. 26, 28).
14. The Dissolve function does not work.	*14.* • The Sepia, Monotone or Slow Shutter mode of Program AE with special effects is activated. • "WIDE MODE" is set to "SQUEEZE" in the Menu Screen. • The previously selected mode of Program AE with special effects was changed after the last selected scene for editing was registered.	*14.* • Turn off Sepia, Monotone or Slow Shutter before adding Dissolve to a scene transition (☞ pg. 26, 28). • Set "WIDE MODE" to "CINEMA" or "OFF" mode (☞ pg. 24). • Make sure you have selected the mode of Program AE with special effects you want before starting editing (☞ pg. 26, 28).
15. The Picture Wipe and Dissolve functions do not work.	*15.* • The last selected editing scene is ending. • At the end of the last selected scene for editing, the Power Switch was set to "OFF". • The power is off.	*15.* • Select Picture Wipe or Dissolve before beginning recording. The effects are then automatically activated (☞ pg. 26). • Do not turn off the camcorder's power after setting Edit-In and Edit-Out points, as they will all be erased (☞ pg. 26). • The camcorder automatically shuts off after 5 minutes have elapsed in the Record-Standby mode. Make sure you continue operations within 5 minutes after engaging Record-Standby mode (☞ pg. 26).

CONTINUED ON NEXT PAGE

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
16. The picture wipe function does not work.	**16** • The Slow Shutter mode is activated. • "WIDE MODE" is not set to "OFF".	**16.** • Disengage the Slow Shutter mode or set "WIDE MODE" to "OFF" before preparing to use the Picture Wipe (☞ pg. 24, 26, 28).
17. Scene transition does not go as expected.	**17.** • When using "Picture Wipe/ Dissolve" (☞ pg. 26), there is a delay of a fraction of a second between the previous record stop-point and the Dissolve start-point. This is normal, but this slight delay becomes especially noticeable when shooting fast-moving subject or during rapid panning.	**17.** —
18. The Video Echo mode does not work.	**18.** • The Picture Wipe or Dissolve functions are in use. • "WIDE MODE" is set to "SQUEEZE" in the Menu Screen. • A Fade-In or Fade-Out is in progress.	**18.** • Set "WIDE MODE" to "CINEMA" or "OFF" mode (☞ pg. 24). • Do not try to use the Video Echo mode during a Fade-In or Fade-Out (☞ pg. 26, 28).
19. Even when Slow Shutter is not selected, the image looks like it is activated.	**19** • When shooting in the dark, the unit becomes highly sensitive to light and the image takes on an effect similar to Slow Shutter.	**19.** • If you want the lighting to look more natural, set GAIN UP to "AGC" or "OFF" in the Menu Screen (☞ pg. 23).
20. There is no strobe when the Classic Film or Strobe mode is activated.	**20.** • The Picture Wipe or Dissolve function is in use.	**20.** • Do not try to use the Classic Film or Strobe mode during a scene transition (☞ pg. 26, 28).
21. White Balance cannot be activated.	**21.** • The Sepia or Monotone mode is activated.	**21.** • Turn off Sepia or Monotone before setting White Balance (☞ pg. 28, 30).
22. When shooting a subject illuminated by bright light, vertical lines appear.	**22.** • This is a result of exceedingly high contrast, and is not a malfunction.	**22.** —
23. When the screen is under direct sunlight during shooting, the screen becomes red or black for an instant.	**23.** • This is not a malfunction.	**23.** —
24. During recording, the date/ time does not appear.	**24.** • "DATE/TIME" is set to "OFF" in the Menu Screen. • Self-Recording is performed.	**24.** • Set "DATE/TIME" to "ON" in the Menu Screen (☞ pg. 25). • During Self-Recording, the date/time does not appear (☞ pg. 15).
25. The indicators and messages do not appear.	**25.** • "ON SCREEN" is set to "SIMPLE" or "TIME CODE" is set to "OFF" in the Menu Screen.	**25.** • Set "ON SCREEN" to "LCD" or "LCD/TV" and set "TIME CODE" to "ON" in the Menu Screen (☞ pg. 25, 32).
26. Images on the LCD monitor appear dark or whitish.	**26.** • In places subject to low temperature, images become dark due to the characteristics of the LCD monitor. When this happens, the displayed colors differ from those that are actually recorded. This is not a defect of the camcorder. • When the LCD monitor's fluorescent light reaches the end of its service life, images on the LCD monitor become dark. Consult your nearest JVC dealer.	**26.** • Adjust the brightness and angle of the LCD monitor (☞ pg. 14, 15).
27. The rear of the LCD monitor is hot.	**27.** • The light used to illuminate the LCD monitor causes it to become hot.	**27.** • Close the LCD monitor to turn it off or set the Power Switch to "OFF", and let the unit cool down.
28. The indicators and the image color on the LCD monitor are not clear.	**28.** • This may occur when the surface or the edge of the LCD monitor is pressed.	**28.** —
29. The LCD monitor or viewfinder indications blink.	**29.** • Certain Fade/Wipe effects, certain modes of Program AE with special effects, "DIS" and other functions that cannot be used together are selected at the same time.	**29.** • Re-read the sections covering Fade/Wipe effects, Program AE with special effects and "DIS" (☞ pg. 24, 26 – 28).

CONTINUED ON NEXT PAGE

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
30. Colored bright spots appear all over the LCD monitor or the viewfinder.	**30.** • The LCD monitor and the viewfinder are made with high-precision technology. However, black spots or bright spots of light (red, green or blue) may appear constantly on the LCD monitor or the viewfinder. These spots are not recorded on the tape. This is not due to any defect of the unit. (Effective dots: more than 99.99 %)	**30.** —
31. During recording, sound cannot be heard.	**31.** • This is normal.	**31.** —
32. Play, Rewind and Fast-Forward functions do not work.	**32.** • The Power Switch is not set to "PLAY".	**32.** • Set the Power Switch to "PLAY" (☞ pg. 31).
33. The tape is moving, but there is no picture.	**33.** • Your TV has AV input terminals, but is not set to its VIDEO mode. • The cassette holder cover is open.	**33.** • Set the TV to the mode or channel appropriate for video playback (☞ pg. 34, 35). • Close the cassette holder cover (☞ pg. 12).
34. The LCD monitor image is distorted.	**34.** • During playback of the unrecorded portion, High-speed Search and still playback, LCD monitor indications appear distorted. This is not a defect.	**34.** —
35. Images on the LCD monitor are jittery.	**35.** • The speaker volume is too great.	**35.** • Turn the speaker volume down (☞ pg. 31).
36. Blocks of noise appear during playback, or there is no playback picture and the screen becomes blue.	**36.** —	**36.** • Clean the video heads with an optional cleaning cassette (☞ pg. 65).
37. The LCD monitor, the viewfinder and the lens have become dirty (ex. fingerprints).	**37.** —	**37.** • Wipe them gently with soft cloth. Wiping strongly can cause damage (☞ pg. 58).
38. An unusual mark appears.	**38.** —	**38.** • Check the section of the manual that explains LCD monitor/viewfinder indications (☞ pg. 59 – 61).

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
39. An error indication (E01 — E06) appears.	**39.** • A malfunction of some kind has occurred. In this case the camcorder's functions become unusable.	**39.** • Remove the power supply (battery pack, etc.) and wait a few minutes for the indication to clear. When it does, you can resume using the camcorder. If the indication remains even though you repeat the above two or three times, please consult your nearest JVC dealer.
40. The charger indicator on the AC Power Adapter/Charger does not light.	**40.** • The temperature of the battery is extremely high/low. • Charging is difficult in places subject to extremely high/low temperatures.	**40.** • To protect the battery, it is recommended to charge it in places with a temperature of 10°C to 35°C (50°F to 95°F) (☞ pg. 64).
41. Picture does not appear on the LCD monitor.	**41.** • The lens cap is attached. • The LCD monitor's brightness setting is too dark.	**41.** • Remove the lens cap (☞ pg. 14). • Adjust the brightness of the LCD monitor (☞ pg. 14). • If the monitor is tilted upward 180 degrees, open the monitor fully (☞ pg. 15).
42. When the image is printed from the printer, a black bar appears at the bottom of the screen.	**42.** • This is not a malfunction.	**42.** • By recording with "DIS" activated (☞ pg. 24) this can be avoided.
43. When the camcorder is connected via the DV connector, the camcorder does not operate.	**43.** • The DV cable was plugged/unplugged with power turned on.	**43.** • Turn the camcorder's power off and on again, then operate it.

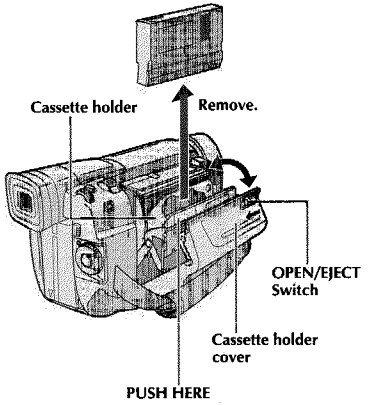
After Use

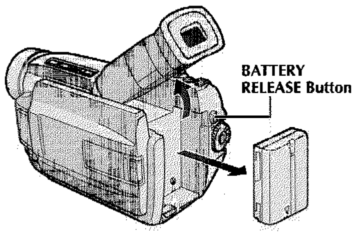
1 Turn off the camcorder.

2 Slide **OPEN/EJECT** in the direction of the arrow, then pull the cassette holder cover open until it locks. The cassette holder opens automatically. Remove the cassette.

3 Press "PUSH HERE" to close the cassette holder.
- Once the cassette holder is closed, it recedes automatically. Wait until it recedes completely before closing the cassette holder cover.

4 Press **BATTERY RELEASE** and remove the battery pack.





Cleaning The Camcorder

1 To clean the exterior, wipe gently with a soft cloth.
Put the cloth in diluted mild soap and wring it well to wipe off heavy dirt. Then wipe again with a dry cloth.

2 Press **PUSH OPEN** and open the LCD monitor. Wipe gently with a soft cloth. Be careful not to damage the monitor. Close the LCD monitor.

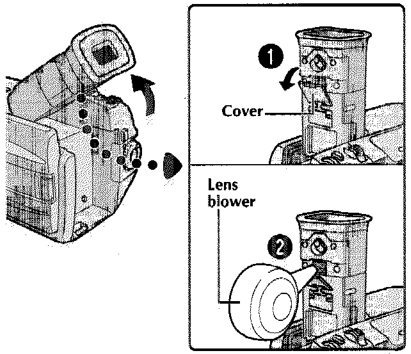
3 To clean the lens, blow it with a blower brush, then wipe gently with lens cleaning paper.

4 To clean the viewfinder, raise it to the vertical position. Carefully open the cover on the bottom of the viewfinder ❶.

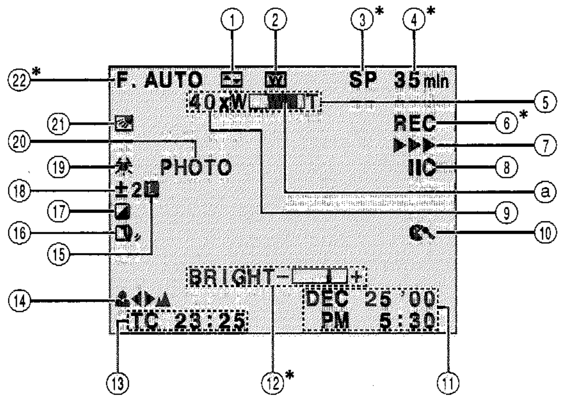
5 Insert a lens blower or soft cloth into the gap at the bottom of the viewfinder and clean the interior of the viewfinder with it ❷.

6 Close the cover. Tilt the viewfinder back to the horizontal position.

NOTES:
- *Avoid using strong cleaning agents such as benzine or alcohol.*
- *Cleaning should be done only after the battery pack has been removed or other power units have been disconnected.*
- *Mold may form if the lens is left dirty.*
- *When using a cleaner or chemically treated cloth refer to the cautions of each product.*



LCD Monitor/Viewfinder Indications During Recording



① Displays the selected Fade/Wipe effect. (☞ pg. 26, 27)

② Appears when in the Squeeze or Cinema mode. (☞ pg. 24)

③* Displays the recording mode (SP or LP). (☞ pg. 13)

④* Displays the tape remaining time. (☞ pg. 14)

⑤ Appears during zooming.
ⓐ Zoom level indicator (☞ pg. 18)

⑥* • "REC" appears during recording.
• "PAUSE" appears during Record-Standby mode. (☞ pg. 14)

⑦ Appears while the tape is running. (☞ pg. 14)

⑧ Appears when the Insert Editing (◐) or Insert Editing Pause (II◐) mode is engaged. (☞ pg. 51)

⑨ • Approximate zoom ratio: Appears during zooming. (☞ pg. 18)
• A☀: Appears when "GAIN UP" is set to "AUTO" and the shutter speed is automatically adjusted. (☞ pg. 23)

⑩ Appears when the wind cut mode is engaged to cut down on noise created by wind. (☞ pg. 25)

⑪ Displays the date/time. (☞ pg. 11)

⑫* • BRIGHT : Displays the brightness of the LCD monitor. (☞ pg. 14)
• SOUND : Displays the sound mode for approx. 5 seconds after turning on the camcorder. (☞ pg. 23)

⑬ Displays the Time Code. (☞ pg. 19, 25)

⑭ Appears when the focus is adjusted manually. (☞ pg. 21)

⑮ Appears when the iris is locked. (☞ pg. 29)

⑯ Appears when Digital Image Stabilizer ("DIS") is engaged. (☞ pg. 24)

⑰ Displays the selected Program AE with special effects. (☞ pg. 28)

⑱ Appears when the exposure is adjusted. (☞ pg. 29)

⑲ Appears when the white balance is adjusted. (☞ pg. 30)

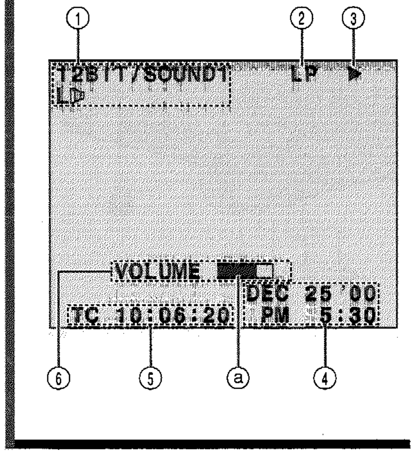
⑳ Appears when taking a Snapshot. (☞ pg. 16, 17)

㉑ Appears when backlight compensation is used. (☞ pg. 29)

㉒* Appears when the power switch is set to "A". (☞ pg. 15)

*Setting "ON SCREEN" to "SIMPLE" in the Menu Screen removes indications marked with * from the screen (☞ pg. 25, 32).

LCD Monitor/Viewfinder Indications During Playback



① Displays the sound mode. (☞ pg. 32, 33)
② Displays the tape speed. (☞ pg. 13)
③ Appears while a tape is running.
- ▶ : Playback
- ▶▶ : Fast-Forward/Shuttle search
- ◀◀ : Rewind/Shuttle search
- ❚❚ : Pause
- ❚❚▶ : Forward slow-motion
- ◀❚❚ : Reverse slow-motion
- ⊖ : Audio Dubbing
- ❚❚⊖ : Audio Dubbing Pause

④ Displays the date/time. (☞ pg. 32, 33)
⑤ Displays the time code. (☞ pg. 32, 33)
⑥ • BRIGHT : Displays the brightness of the LCD monitor. (☞ pg. 14)
• SOUND : Displays the speaker volume. (☞ pg. 31)

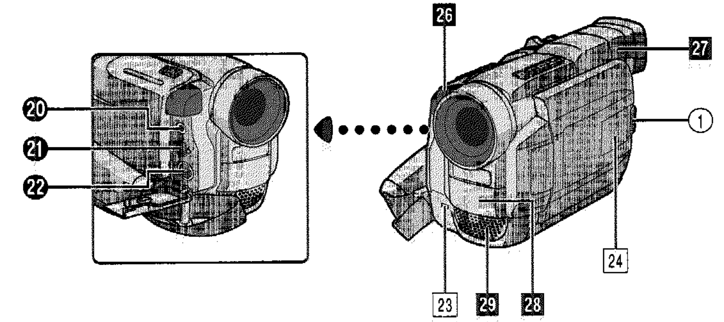
ⓐ The level indicator moves.

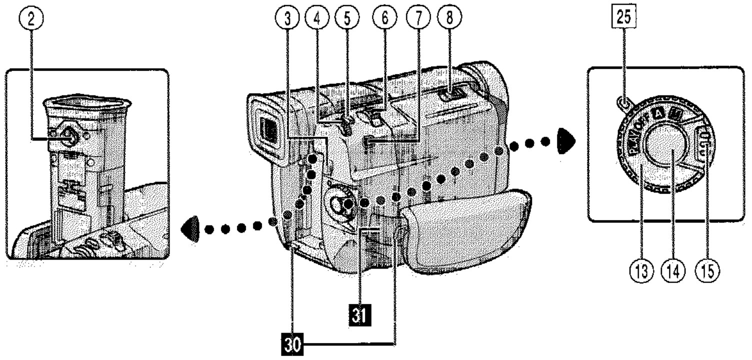
Warning Indications

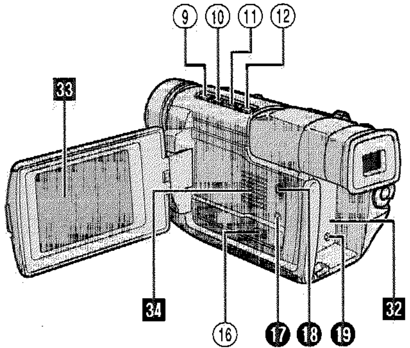
Indications	Function
▭	Displays the battery remaining power. Remaining power level: high — ▮▮▮ → ▮▮ → ▮ → ▭ Remaining power level: exhausted — As the battery power comes close to nil, the battery indicator ▭ blinks. When the battery power is exhausted, power turns off automatically.
▭	Appears when no tape is loaded. (☞ pg. 12)
CHECK TAPE'S ERASE PROTECTION SWITCH	Appears when the erase protection tab is set to "SAVE" while the Power Switch is set to "A" or "M". (☞ pg. 12)
⊗ HEAD CLEANING REQUIRED USE CLEANING CASSETTE	Appears if dirt is detected on the heads. Use an optional cleaning cassette. (☞ pg. 65)
▲ CONDENSATION, OPERATION PAUSED PLEASE WAIT	Appears if condensation occurs. When this indication is displayed, wait more than 1 hour until condensation disappears.

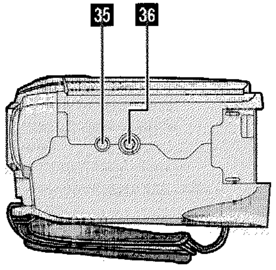
Indications	Function
TAPE!	Appears if a tape is not loaded when the Recording Start/Stop Button or SNAPSHOT Button is pressed while the Power Switch is set to "A" or "M".
TAPE END	Appears when the tape ends during recording or playback. (☞ pg. 15)
DIFFERENT FORMATTED TAPE	Appears if a tape in another format is loaded.
SET DATE/TIME!	• Appears when the date/time is not set. (☞ pg. 11) • Appears when the built-in clock battery runs out and the previously set date/time is erased. Consult your nearest JVC dealer for replacement.
LENS CAP	Appears for 5 seconds after power is turned on if the lens cap is attached.
A. DUB ERROR!	• Appears if Audio Dubbing is attempted on a blank portion of a tape.
A. DUB ERROR! <CANNOT DUB ON AN LP RECORDED TAPE> <CANNOT DUB ON A 16BIT RECORDING> <CHECK TAPE'S ERASE PROTECTION SWITCH>	• Appears if Audio Dubbing is attempted on a tape recorded in the LP mode. • Appears if Audio Dubbing is attempted on a tape recorded in 16-bit audio. • Appears if A. DUB (⊖) on the remote control is pressed when the erase protection tab is set to "SAVE".
INSERT ERROR !	• Appears if Insert Editing is attempted on a blank portion of a tape.
INSERT ERROR ! <CANNOT EDIT ON AN LP RECORDED TAPE> <CHECK TAPE'S ERASE PROTECTION SWITCH>	• Appears if Insert Editing is attempted on a tape recorded in the LP mode. • Appears if INSERT (◐) on the remote control is pressed when the erase protection tab is set to "SAVE".
COPYING FAILED	Appears if dubbing of copyguarded signals is attempted while this camcorder is being used as a recorder.
E01 — E06 UNIT IN SAFEGUARD MODE REMOVE AND REATTACH BATTERY	The error indications (E01 — E06) show what type of malfunction has occured. When an error indication appears, the camcorder turns off automatically. Remove the power supply (battery, etc.) and wait a few minutes for the indication to clear. When it does, you can resume using the camcorder. If the indication remains, consult your nearest JVC dealer.

INDEX Controls, Connectors And Indicators









Controls

① Monitor Open Button [PUSH OPEN] ☞ pg. 14

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③ Battery Release Button [BATTERY RELEASE] ☞ pg. 9

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  • LCD Monitor BRIGHT (Brightness) Control [+, –] ☞ pg. 14

⑤ Snapshot Button [SNAPSHOT] ☞ pg. 16, 17

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  • Speaker Volume Control [VOL.] ☞ pg. 31

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⑨ Stop Button [■] ☞ pg. 31

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⑫ • Fast-Forward Button [▶▶] ☞ pg. 31
  • FOCUS Button ☞ pg. 21

⑬ Power Switch [A, M, PLAY, OFF] ☞ pg. 15

⑭ Recording Start/Stop Button ☞ pg. 14

⑮ Lock Button ☞ pg. 14

⑯ Video Light Switch [LIGHT OFF/AUTO/ON] ☞ pg. 20

Connectors

To connect cables to the following connectors ⓱ and ⓲, open the LCD monitor.

⓱ PC (DIGITAL PHOTO) Connector ☞ pg. 36

⓲ J Terminal/Edit Connector [JLIP (Joint Level Interface Protocol)/EDIT] ☞ pg. 45
  • Connect the editing cable when performing Random Assemble Editing.
  • Connect to a JLIP-compatible camcorder or VCR to control it from the computer using the provided Software.

⓳ DC Input Connector ☞ pg. 9

The connectors ⑳ to ㉒ are located beneath a cover.

⑳ Audio/Video Output Connector [AV] ☞ pg. 34, 38, 45

㉑ Digital Video Connector [DV IN/OUT] (i.link*) ☞ pg. 36, 37, 39
  * i.Link refers to the IEEE1394-1995 industry specification and extensions thereof. The i logo is used for products compliant with the i.Link standard.

㉒ S-Video Output Connector [S] ... ☞ pg. 34, 38, 45

Indicators

23 Tally Lamp ☞ pg. 14

24 Side LED Indicator (GR-DVL500 only) ☞ pg. 24

25 Power Lamp ☞ pg. 14

Other Parts

26 • Remote Sensor ☞ pg. 40
  • Camera Sensor
  Be careful not to cover this area, a sensor necessary for shooting is built-in here.

27 Viewfinder ☞ pg. 10

28 Video Light ☞ pg. 20

29 Stereo Microphone ☞ pg. 50

30 Shoulder Strap Eyelets ☞ pg. 10

31 Grip Strap ☞ pg. 10

32 Battery Pack Mount ☞ pg. 9

33 LCD Monitor ☞ pg. 14, 15

34 Speaker ☞ pg. 31

35 Stud Hole ☞ pg. 10

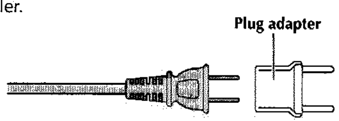
36 Tripod Mounting Socket ☞ pg. 10

When using the AC Power Adapter/Charger in areas other than the USA

- The provided AC Power Adapter/Charger features automatic voltage selection in the AC range from 110 V to 240 V.

USING HOUSEHOLD AC PLUG ADAPTER

In case of connecting the unit's power cord to an AC wall outlet other than American National Standard C73 series type use an AC plug adapter, called a "Siemens Plug", as shown.
For this AC plug adapter, consult your nearest JVC dealer.



Video Light

DANGER

- The video light can become extremely hot. Do not touch it either while in operation or soon after turning it off, otherwise serious injury may result.
- Do not place the camcorder into the carrying case immediately after using the video light, since it remains extremely hot for some time.
- When operating, keep a distance of about 30 cm (11-13/16") between the video light and people or objects.
- Do not use near flammable or explosive materials.
- It is recommended that you consult your nearest JVC dealer for replacing the video light.

General Battery Precautions

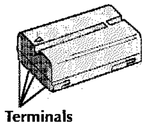
If the remote control is not functioning even if it is being operated correctly, the batteries are exhausted. Replace them with fresh ones.

Use only the following batteries: AAA (R03) size x 2

Please make note of the following rules for battery use. When misused, the batteries can leak or explode.

1. When replacing batteries, refer to page 40.
2. **Do not** use any different size of batteries from those specified.
3. Be sure to install batteries in the correct direction.
4. **Do not** use rechargeable batteries.
5. **Do not** expose the batteries to excessive heat as they can leak or explode.
6. **Do not** dispose of the batteries in a fire.
7. Remove the batteries from the unit if it is to be stored for an extended period to avoid battery leakage which can cause malfunctions.

Battery Packs



The supplied battery pack is a lithium-ion battery. Before using the supplied battery pack or an optional battery pack, be sure to read the following cautions:

1. To avoid hazards . . .

.... **do not** burn.

.... **do not** short-circuit the terminals. When transporting, make sure the provided battery cap is attached to the battery. If the battery cap is misplaced, carry the battery in a plastic bag.

.... **do not** modify or disassemble.

.... **do not** expose the battery to temperatures exceeding 60°C (140°F), as this may cause the battery to overheat, explode or catch fire.

.... use only specified chargers.

2. To prevent damage and prolong service life . . .

.... **do not** subject to unnecessary shock.

.... charge in an environment where temperatures are within the tolerances shown in the chart below. This is a chemical reaction type battery—cooler temperatures impede chemical reaction, while warmer temperatures can prevent complete charging.

.... store in a cool, dry place. Extended exposure to high temperatures will increase natural discharge and shorten service life.

.... fully charge and then fully discharge the battery every 6 months when storing the battery pack over a long period time.

.... remove from charger or powered unit when not in use, as some machines use current even when switched off.

NOTES:

- *It is normal for the battery pack to be warm after charging, or after use.*

Temperature Range Specifications

Charging	*10°C to 35°C (50°F to 95°F)*
Operation	*0°C to 40°C (32°F to 104°F)*
Storage	*–10°C to 30°C (14°F to 86°F)*

- *Recharging time is based on room temperature of 20°C (68°F).*
- *The lower the temperature, the longer recharging takes.*

Cassettes

To properly use and store your cassettes, be sure to read the following cautions:

1. During use . . .

.... make sure the cassette bears the Mini DV mark.

.... be aware that recording onto prerecorded tapes automatically erases the previously recorded video and audio signals.

.... make sure the cassette is positioned properly when inserting.

.... do not load and unload the cassette repeatedly without allowing the tape to run at all. This slackens the tape and can result in damage.

.... do not open the front tape cover. This exposes the tape to fingerprints and dust.

2. Store cassettes . . .

.... away from heaters or other heat sources.

.... out of direct sunlight.

.... where they won't be subject to unnecessary shock or vibration.

.... where they won't be exposed to strong magnetic fields (such as those generated by motors, transformers or magnets).

.... vertically, in their original cases.

LCD Monitor

1. To prevent damage to the LCD monitor, DO NOT . . .

.... push it strongly or apply any shocks.

.... place the camcorder with the LCD monitor on the bottom.

2. To prolong service life . . .

.... avoid rubbing it with coarse cloth.

3. Be aware of the following phenomena for LCD monitor use.

These are not malfunctions:

- While using the camcorder, the surface around the LCD monitor and/or the back of the LCD monitor may heat up.
- If you leave power on for a long time, the surface around the LCD monitor becomes hot.

Main Unit

1. For safety, DO NOT . . .

.... open the camcorder's chassis.

.... disassemble or modify the unit.

.... short-circuit the terminals of the battery pack. Keep it away from metallic objects when not in use.

.... allow inflammables, water or metallic objects to enter the unit.

.... remove the battery pack or disconnect the power supply while the power is on.

.... leave the battery pack attached when the camcorder is not in use.

2. Avoid using the unit . . .

.... in places subject to excessive humidity or dust.

.... in places subject to soot or steam such as near a cooking stove.

.... in places subject to excessive shock or vibration.

.... near a television set.

.... near appliances generating strong magnetic or electric fields (speakers, broadcasting antennas, etc.).

.... in places subject to extremely high (over 40°C or 104°F) or extremely low (under 0°C or 32°F) temperatures.

3. DO NOT leave the unit . . .

.... in places of over 50°C (122°F).

.... in places where humidity is extremely low (below 35%) or extremely high (above 80%).

.... in direct sunlight.

.... in a closed car in summer.

.... near a heater.

4. To protect the unit, DO NOT . . .

.... allow it to become wet.

.... drop the unit or strike it against hard objects.

.... subject it to shock or excessive vibration during transportation.

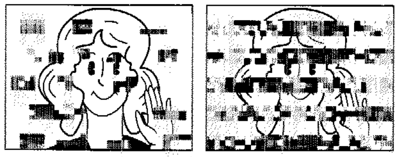
.... keep the lens directed at extremely bright objects for long periods.

.... expose the lens to direct sunlight.

.... carry it by holding the LCD monitor or the viewfinder.

.... swing it excessively when using the shoulder strap or the grip.

5. Dirty heads can cause the following problems:



- No picture during playback.
- Blocks of noise appear during playback.
- During recording, the Head Clog Warning indicator "⊗" appears.

In such cases, use an optional cleaning cassette. Insert it and play back. If the cassette is used more than once consecutively, damage to the video heads may result. After the camcorder plays back for about 20 seconds, it stops automatically. Also refer to the cleaning cassette's instructions.
If, after using the cleaning cassette, the problems still exist, consult your nearest JVC dealer.
Mechanical moving parts used to move the video heads and video tape tend to become dirty and worn out over time. In order to maintain a clear picture at all times, periodic check-ups are recommended after using the unit for about 1,000 hours. For periodic check-ups please consult your nearest JVC dealer.

How To Handle A CD-ROM

- Take care not to soil or scratch the mirror surface (opposite to the printed surface). Do not write anything or put a sticker on either the front or back surface. If the CD-ROM gets dirty, gently wipe it with a soft cloth outward from the center hole using a circular motion.
- Do not use conventional disc cleaners or cleaning spray.
- Do not bend the CD-ROM or touch its mirror surface.
- Do not store your CD-ROM in a dusty, hot or humid environment. Keep it away from direct sunlight.

About moisture condensation . . .

- You have observed that pouring a cold liquid into a glass will cause drops of water to form on the glass' outer surface. This same phenomenon occurs on the head drum of a camcorder when it is moved from a cool place to a warm place, after heating a cold room, under extremely humid conditions or in a place directly subjected to the cool air from an air conditioner.
- Moisture on the head drum can cause severe damage to the video tape, and can lead to internal damage to the camcorder itself.

Serious malfunctioning

If malfunctioning occurs, stop using the unit immediately and consult your local JVC dealer.

The camcorder is a microcomputer-controlled device. External noise and interference (from a TV, a radio, etc.) might prevent it from functioning properly. In such cases, first disconnect its power supply unit (battery pack, AC Power Adapter/Battery Charger, etc.) and wait a few minutes and then re-connect it and proceed as usual from the beginning.

Declaration of Conformity

Model Number : GR-DVL500U/300U
Trade Name : JVC
Responsible party : JVC AMERICAS CORP.
Address : 1700 Valley Road Wayne,
N. J. 07470
Telephone Number : 973-315-5000

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Change or modifications not approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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SPECIFICATIONS

Camcorder

For General

Power supply : DC 6.3 V ⎓ (Using AC Power Adapter/Charger)
DC 7.2 V ⎓ (Using battery pack)

Power consumption
LCD monitor off, viewfinder on : Approx. 4.3 W
LCD monitor on, viewfinder off : Approx. 5.3 W
Video light : Approx. 3.5 W
Dimensions (W x H x D) : 80 mm x 96 mm x 159 mm (3-3/16" x 3-13/16" x 6-5/16")
(with the LCD monitor closed and the viewfinder pushed down)
Weight : Approx. 570 g (1.3 lbs)
Operating temperature : 0°C to 40°C (32°F to 104°F)
Operating humidity : 35% to 80%
Storage temperature : –20°C to 50°C (–4°F to 122°F)
Pickup : 1/4" CCD
Lens : F 1.8, f = 3.6 mm to 36 mm, 10:1 power zoom lens
Filter diameter : ø37 mm
LCD monitor
GR-DVL500 : 3.0" diagonally measured, LCD panel/TFT active matrix system
GR-DVL300 : 2.5" diagonally measured, LCD panel/TFT active matrix system
Viewfinder
GR-DVL500 : Electronic viewfinder with 0.44" color LCD
GR-DVL300 : Electronic viewfinder with 0.24" black/white LCD
Speaker : Monaural

For Digital Video Camera

Format : DV format (SD mode)
Signal format : NTSC standard
Recording/Playback format : Video: Digital component recording
: Audio: PCM digital recording, 32 kHz 4-channel (12-bit),
48 kHz 2-channel (16-bit)
Cassette : Mini DV cassette
Tape speed : SP: 18.8 mm/s
LP: 12.5 mm/s
Maximum recording time (using 80 min. cassette) : SP: 80 min.
LP: 120 min.

For Connectors

S : Y : 1 V (p-p), 75 Ω, analog output
C : 0.29 V (p-p), 75 Ω, analog output
AV
Video output : 1 V (p-p), 75 Ω, analog
Audio output : 300 mV (rms), 1 kΩ, analog, stereo
DV
Input/output : 4-pin, IEEE 1394 compliant
PC (DIGITAL PHOTO)
Digital still output : ø2.5 mm, 3-pole
JLIP/EDIT : ø3.5 mm, 4-pole

AC Power Adapter/Charger AA-V40U

Power requirement
U.S.A. and Canada : AC 120 V∿, 60 Hz
Other countries : AC 110 V to 240 V∿, 50 Hz/60 Hz
Power consumption : 23 W
Output
Charge : DC 7.2 V ⎓, 1.2 A
VTR : DC 6.3 V ⎓, 1.8 A
Dimensions (W x H x D) : 68 mm x 38 mm x 110 mm (2-11/16" x 1-1/2" x 4-3/8")
Weight : Approx. 250 g (0.56 lbs)

Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.

SECTION 1
DISASSEMBLY

1.1 BEFORE ASSEMBLY AND DISASSEMBLY

1.1.1 Precautions

1. Be sure to remove the power supply unit prior to mounting and soldering of parts.
2. When removing a component part that needs to disconnect the connector and to remove the screw for removing itself, first disconnect the connecting wire from the connector and then remove the screw beforehand.
3. When connecting and disconnecting the connectors, be careful not to damage the wire.
4. When replacing chip parts (especially IC parts), desolder completely first (to prevent peeling of the pattern).
5. Tighten screws properly during the procedures. Unless specified otherwise, tighten screws at a torque of 0.078N·m (0.8kgf·cm).

1.1.2 Assembly and disassembly

STEP	PART	Fig No.	POINT	NOTE
①	TOP COVER	Fig.1-3-2	2(S①a), (S①b)	–
②	FRONT ASSY (Inc. MIC, DC LIGHT)		(S②a), (S②b), (S②c), (S②d) (L②a), 2(L②b) ☆CN Ⓐ, Ⓑ	NOTE ②a NOTE ②b NOTE ②c NOTE ②d

↑ (1) ↑ (2) ↑ (3) ↑ (4) ↑ (5)

(1) Indicate the disassembly steps. When assembling, perform in the reverse order of these steps. This number corresponds to the number in the disassembly diagram.

(2) Indicates the name of disassembly/assembly parts.

(3) Indicates the number in the disassembly diagram.

(4) Indicates parts and points such as screws, washers, springs which must be removed during disassembly/assembly.
S = Screw
Lock (L), soldering (SD), shield, connector, etc.
P = Spring
W = Washer
☆CN = Connector

[Example] 2(S①a): Remove the two screws (S①a) fastening the part ①.

(5) Precautions on disassembly/assembly.

1.1.3 Destination of connectors

Note: *Three kinds of double-arrows in connection tables respectively show kinds of connector/wires.*

↔ : Wire
⇔ : Flat wire
⟷ : Board to Board connector

[Example]

CONN. No.	CONNECTOR				Pin No.
Ⓐ	MAIN	CN104	↔	DC LIGHT	2

1.1.4 Disconnection of Connectors (Wires)

Connector
Pull both ends of the connector in the arrow direction, remove the lock and disconnect the flat wire.

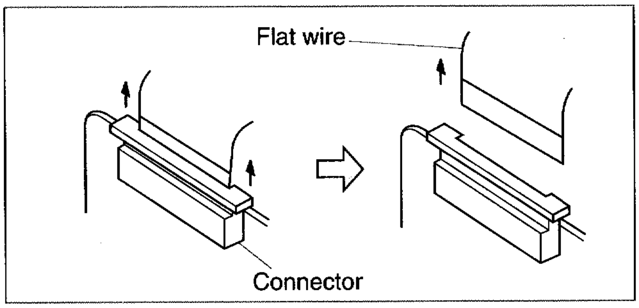


Fig. 1-1-1 Connector 1

Extend the locks in the direction of the arrow for unlocking and then pull out the wire. After removing the wire, immediately restore the locks to their original positions because the locks are apt to come off the connector.

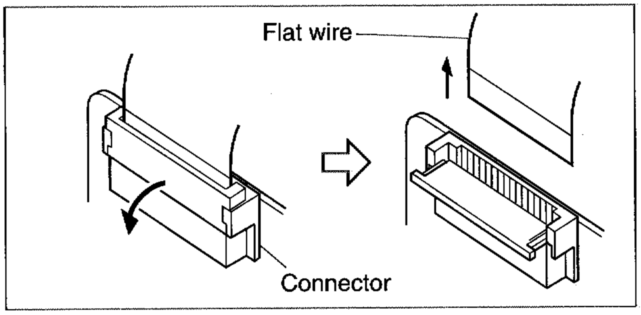


Fig. 1-1-2 Connector 2

B-B connector
Pull the board by both the sides in the direction of the arrow for disconnecting the B-B connector

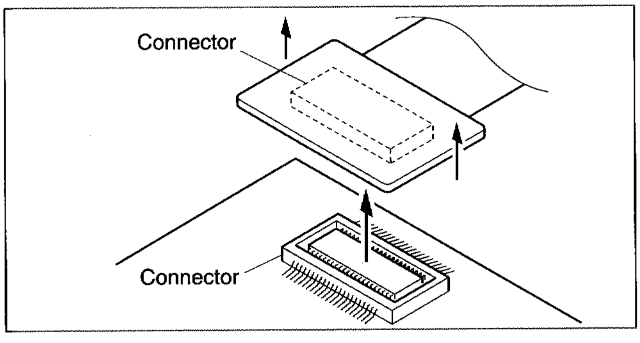


Fig. 1-1-3 Connector 3

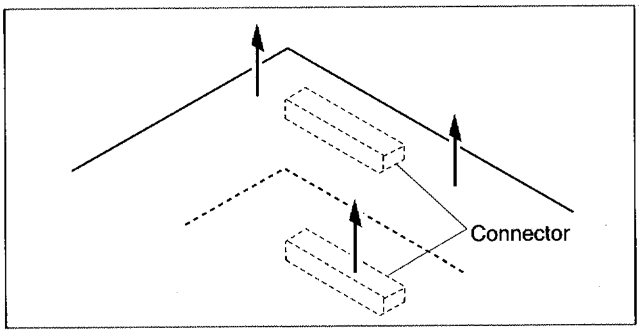


Fig. 1-1-4 Connector 4

1.2 TOOLS AND EQUIPMENTS REQUIRED FOR ADJUSTMENTS

1.2.1 Tools required for adjustments

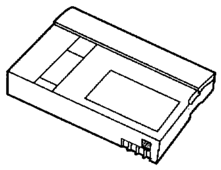
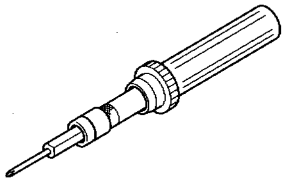
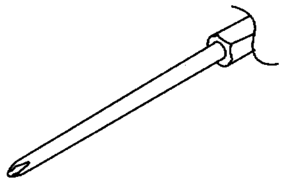
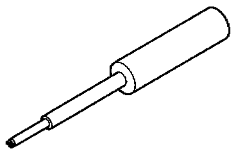
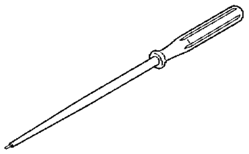
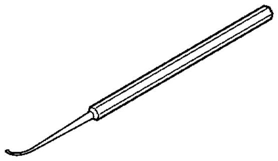
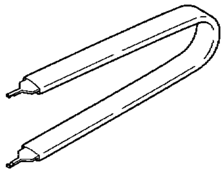
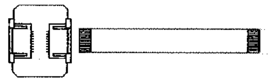
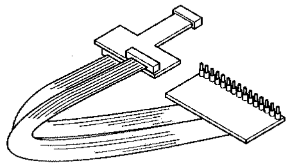
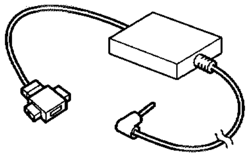
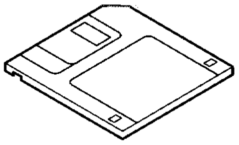
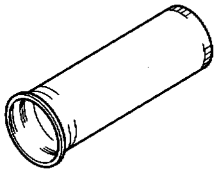
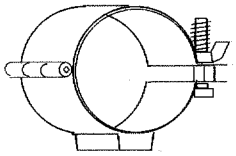
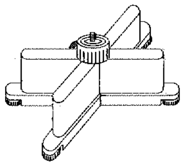
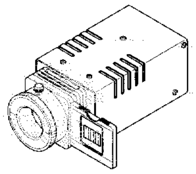
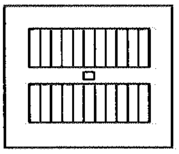
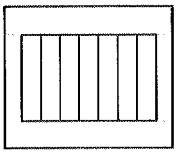
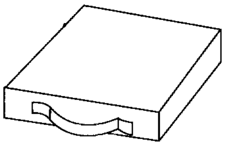
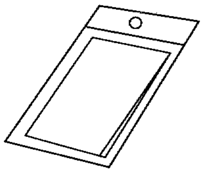
1 Alignment tape MC-1	2 Torque driver YTU94088	3 Bit YTU94088-003	4 Guide driver YTU94148A
			
5 Adjustment driver YTU94028	6 Chip IC replacement jig PTS40844-2	7 Connector extractor YTU94036A	8 Patch cord YTU94074-24/YTU94077-24
			
9 Jig connector cable YTU93082E	10 PC cable QAM0099-002	11 Service support system YTU94057-46	12 INF adjustment lens YTU92001B
			
13 INF adjustment lens holder YTU94087	14 Camera stand YTU93079	15 Light box unit YTU93096A	16 Gray scale chart YTU94133A
			
17 Color bar chart YTU94133C	18 Soldering kit YTU96016B	19 Cleaning cloth KSMM-01	
			

Table 1-2-1

1. Alignment tape
   To be used for check and adjustment of interchangeability of the mechanism.
2. Torque driver
   Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.
3. Bit
   This bit is slightly longer than those set in conventional torque drivers.
4. Guide driver
   To be used to turn the guide roller to adjustment of the linarity of playback envelope.
5. Adjustment driver
   To be used for adjustment.
6. Chip IC replacement jig
   To be used for adjustment of the camera system.
7. Connector extractor
   To be used to release the connector.
8. Patch cord
   To be used to connect electrical parts, P.C. boards, etc. for servicing.

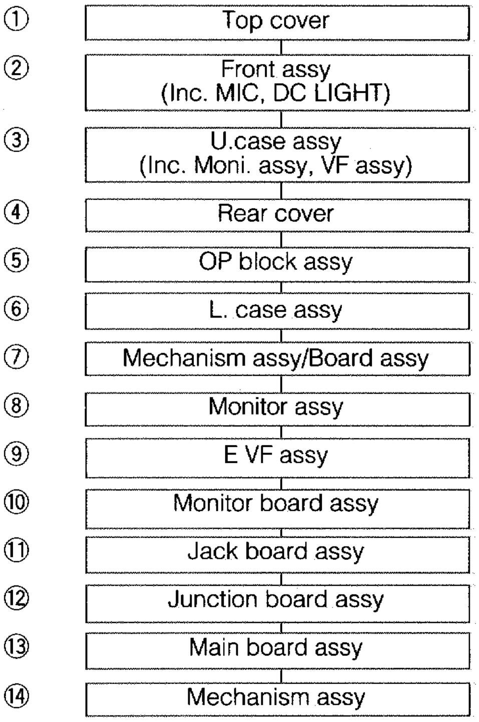
   Note: *The patch cord that is newly required for repair service. Besides this patch cord, existing patch cords are also required for service.*
9. Jig connector cable
   Connected to CN105 of the main board and used for measuring error rates, etc.

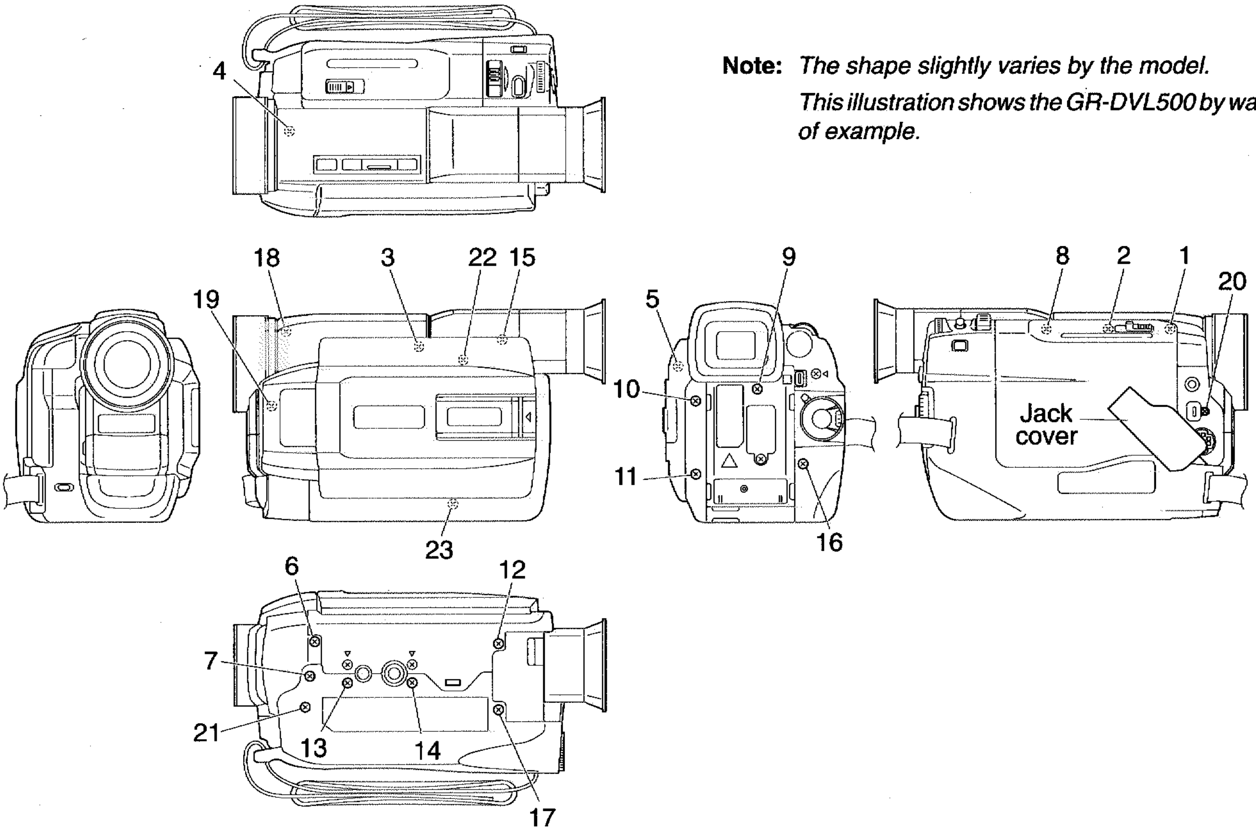
10. PC cable
    To be used to connect the VideoMovie and a personal computer with each other when a personal computer is used for adjustment.
11. Service support system
    To be used for adjustment with a personal computer.
12. INF adjustment lens
    To be used for adjustment of the camera system.
13. INF adjustment lens holder
    To be used together with the camera stand (19) for operating the VideoMovie in the stripped-down condition such as the status without the exterior parts or for using commodities that are not yet conformable to the interchangeable ring.
14. Camera stand
    To be used together with the INF adjustment lens holder.
15. Light box unit
    To be used for adjustment of the camera system.
16. Gray scale chart (for No. 15)
    To be used for adjustment of the camera system.
17. Color bar chart (for No. 15)
    To be used for adjustment of the camera system.
18. Soldering kit
    Thin head is made so that it can be inserted into small spaces.
19. Cleaning cloth
    Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

1.3 DISASSEMBLY/ASSEMBLY OF CABINET PARTS AND BOARD ASSEMBLY

1.3.1 Disassembly flow chart

This flowchart indicates the disassembly step for the cabinet parts and board assembly in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order.


① Top cover
② Front assy (Inc. MIC, DC LIGHT)
③ U.case assy (Inc. Moni. assy, VF assy)
④ Rear cover
⑤ OP block assy
⑥ L. case assy
⑦ Mechanism assy/Board assy
⑧ Monitor assy
⑨ E VF assy
⑩ Monitor board assy
⑪ Jack board assy
⑫ Junction board assy
⑬ Main board assy
⑭ Mechanism assy


4
18
3
22
15
19
5
9
8
2
1
20
10
11
Jack cover
16
23
6
12
7
21
13
14
17

Note: *The shape slightly varies by the model. This illustration shows the GR-DVL500 by way of example.*

Fig. 1-3-1

1.3.2 Disassembly method (I)

Note: *For the position of the screw, refer to Fig. 1-3-1.*

STEP No.	PART	Fig No.	POINT	NOTE
①	TOP COVER	Fig.1-3-2	2(S①a), (S①b), (L①)	–
②	FRONT ASSY (Inc. MIC, DC LIGHT)		(S②a), (S②b), (S②c), (S②d) (L②a), 2(L②b) ☆CN Ⓐ, Ⓑ	NOTE②a NOTE②b NOTE②c NOTE②d
③	U. CASE ASSY (Inc. MONITOR UNIT ASSY / VF ASSY)		(S③a), (S③b), 2(S③c) (S③d), 2(S③e), (L③) ☆CN Ⓒ	NOTE③a NOTE③b NOTE③c
④	REAR COVER		3(S④) ☆CN Ⓓ	NOTE④
⑤	OP BLOCK ASSY		2(S⑤) BKT (OP) ☆CN Ⓔ, Ⓕ	–
⑥	L. CASE ASSY		(S⑥a), (S⑥b), 2(S⑥c) ☆CN Ⓖ JACK COVER	NOTE⑥
⑦	MECHANISM ASSY /MAIN BOARD ASSY, etc.		–	NOTE⑦

Table 1-3-2

CONN. No.	CONNECTOR					Pin No.
Ⓐ	MAIN	CN104	↔	DC LIGHT		2
Ⓑ	MAIN	CN106	↔	MIC		3
Ⓒ	MAIN	CN101	⇔	MONITOR	CN7601	32
Ⓓ	REAR	CN551	↔	MAIN	CN103	11
Ⓔ	MAIN	CN107	⇔	CCD		18
Ⓕ	MAIN	CN108	⇔	OP BLOCK		24
Ⓖ	MAIN	CN114	⇔	ZOOM OPE		15

Table 1-3-3

Note②a: *Pay heed to the screws to remove.*

Note②b: *Pay heed to the screws to remove.*

Note②c: *For removing the DC light, disengage it from the internal pawls in both sides.*

Note②d: *For removing the microphone, remove the screw from the inside and draw out the microphone.*
If the seat is stuck to the inside, remove it beforehand.

Note③a: *Pay heed to the screws to remove.*

Note③b: *Pay heed to the part not to damage it.*

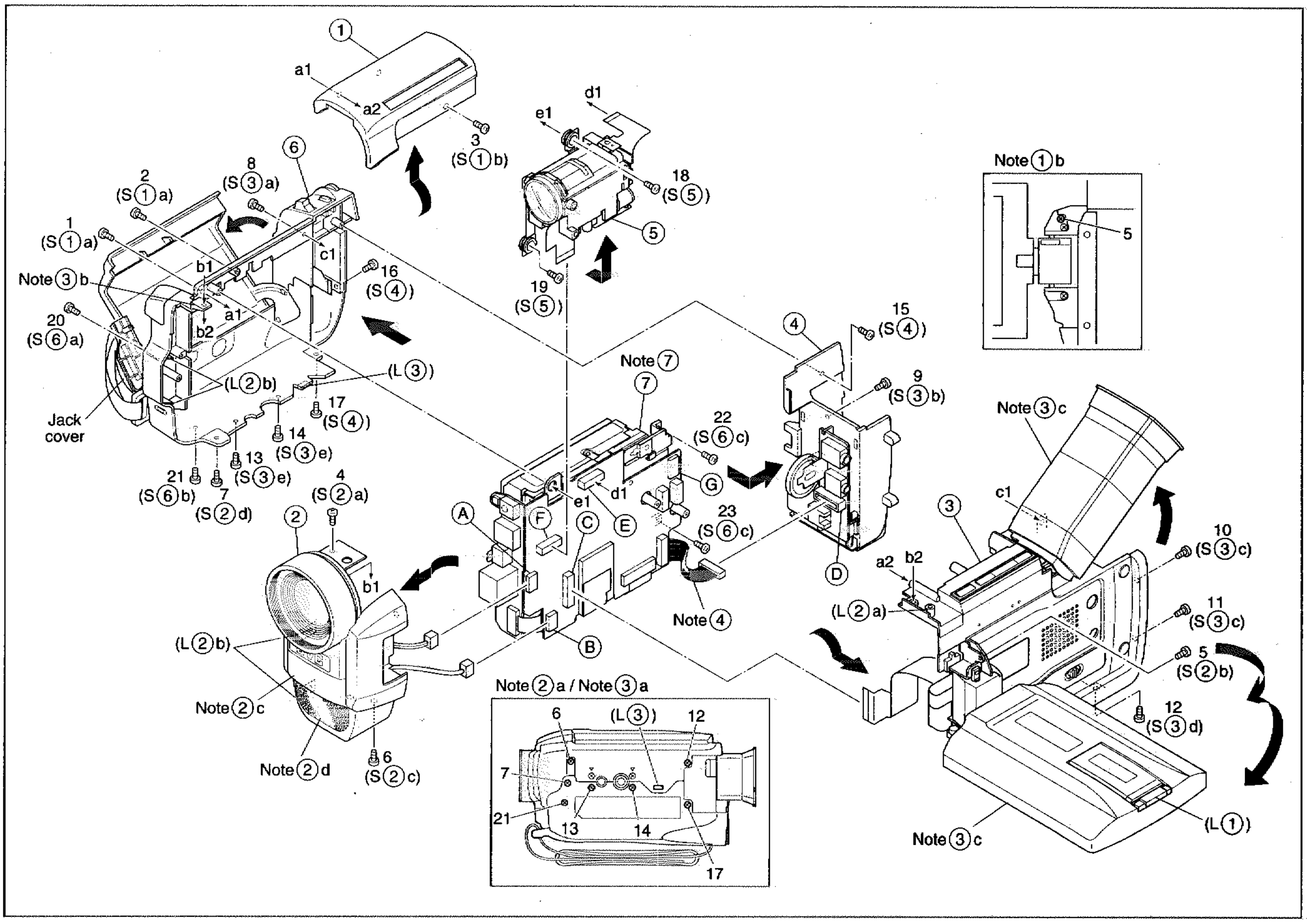
Note③c: *For disassembling the ⑧ monitor assembly and ⑨VF assembly, refer to the section 1.3.3.*

Note④: *When assembling, pay careful attention to the wire not to damage it.*

Note⑥: *Remove the cover and the screws.*

Note⑥: *Remove the cover and the screws.*

Note⑦: *For disassembling the mechanism assembly and board assemblies, refer to the section 1.3.4.*



①
a1
a2
3
(S①b)
d1
e1
18
(S⑤)
⑤
19
(S⑤)
⑥
2
(S①a)
8
(S③a)
1
(S①a)
Note③b
c1
b1
16
(S④)
20
(S⑥a)
a1
b2
(L②b)
(L③)
17
(S④)
14
(S③e)
13
(S③e)
21
(S⑥b)
7
(S②d)
4
(S②a)
Jack cover
②
b1
(L②b)
Note②c
Note②d
6
(S②c)
Note⑦
⑦
22
(S⑥c)
Ⓖ
Ⓐ
Ⓕ
e1
Ⓒ
d1
Ⓔ
23
(S⑥c)
Note④
Ⓑ
④
15
(S④)
9
(S③b)
Ⓓ
Note①b
5
Note③c
③
c1
10
(S③c)
a2
b2
(L②a)
11
(S③c)
5
(S②b)
12
(S③d)
(L①)
Note③c
Note②a / Note③a
6
(L③)
12
7
21
13
14
17

Fig. 1-3-2

1.3.3 Disassembly method (II)

STEP No.	PART	Fig No.	POINT	NOTE
⑧	MONITOR ASSY	Fig.1-3-3	2(S⑧), (L⑧) ☆CN Ⓗ	NOTE⑧
⑨	E VF ASSY		(S⑨a), 2(S⑨b) ☆CN Ⓙ	NOTE⑨a NOTE⑨b
⑩	MONITOR BOARD ASSY		(S⑩a), (S⑩b), 2(S⑩c) SPEAKER, PLATE (SPK) KNOB (SW) ☆CN Ⓚ	NOTE⑩a NOTE⑩b

Table 1-3-4

CONN. No.	CONNECTOR					Pin No.
Ⓗ	MONITOR	CN7604	⇔	LCD BL	CN7501	33/32
Ⓙ	MONITOR	CN7603	⇔	C-VF	CN7551	20
Ⓚ	MONITOR	CN7602	⇔	B/W VF	CN7201	20
	MONITOR	CN7605	↔	SPEAKER		2

Table 1-3-5

Note⑧: *Carefully proceed in the work not to damage the switch.*

Note⑨a: *When disassembling, raise the E. VF assembly to the utmost position for disconnecting the FPC and removing the screw.*

Note⑨b: *For removing the E. VF assembly, raise it furthermore and remove it while widening the opening between the E. VF assembly and operation switch as the tapped holes No. 4, 5 and holes of the hinge assembly are shifted off each other.*

Pay heed to the FPC wire and parts not to break or damage anything through the work.

Note⑩a: *When assembling, check to see if the speaker is properly set in the frame and tightly fastened with the plate.*

Note⑩b: *When disassembling, be careful not to lose any part.*

When assembling, pay careful attention to the position of the switch and knob, and check to see if the switch slides smoothly after assembly.

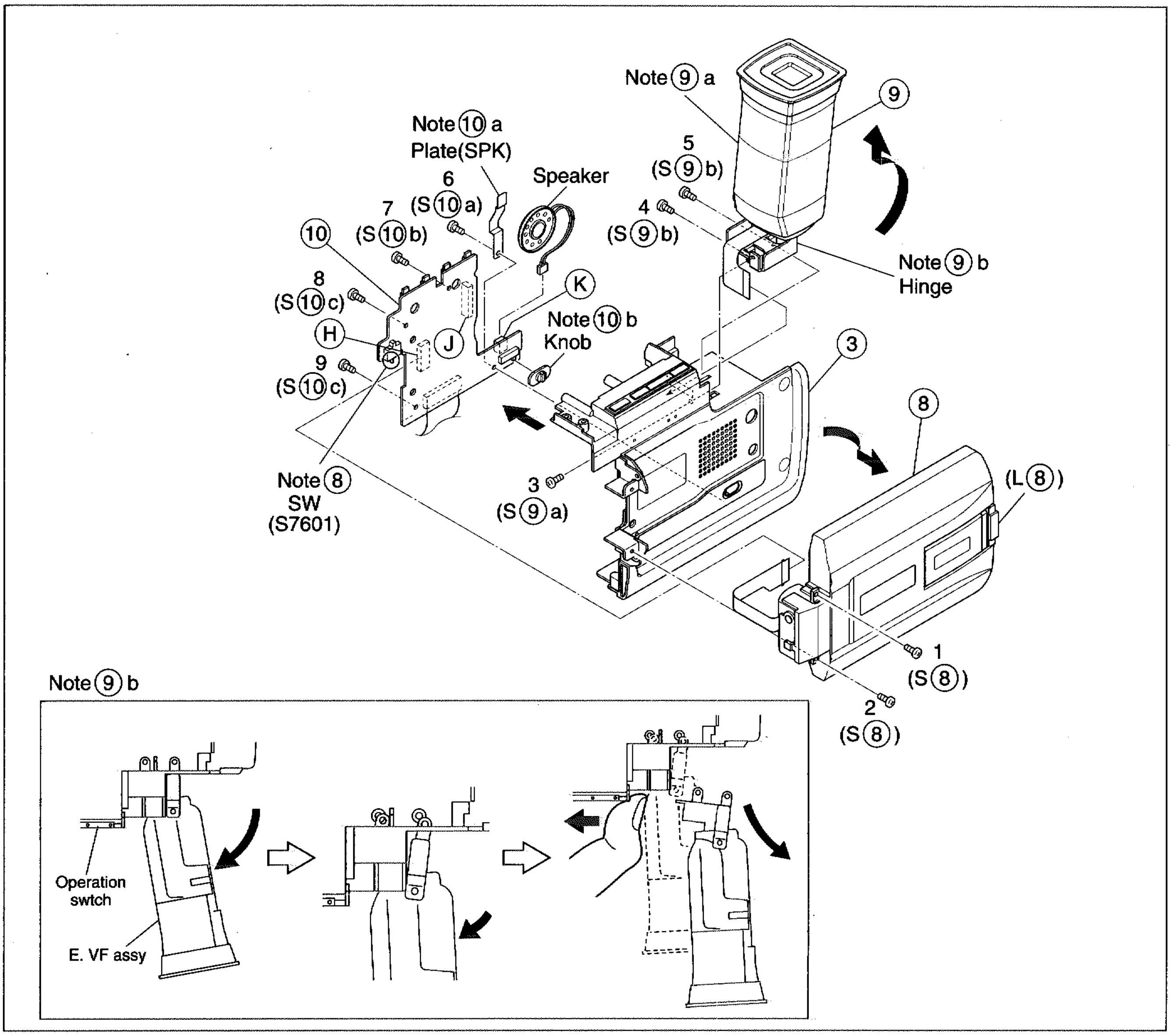

Note ⑨ a
⑨
Note ⑩ a
Plate(SPK)
5
(S⑨b)
6
Speaker
7 (S⑩a)
4
⑩
(S⑩b)
(S⑨b)
Note ⑨ b
Hinge
8
(S⑩c)
Ⓚ
Note ⑩ b
Knob
Ⓗ
Ⓙ
③
9
(S⑩c)
⑧
Note ⑧
SW
(S7601)
3
(S⑨a)
(L⑧)
1
(S⑧)
2
(S⑧)
Note ⑨ b
Operation swtch
E. VF assy

Fig. 1-3-3

1.3.4 Disassembly method (Ⅲ)

STEP No.	PART	Fig No.	POINT	NOTE
⑪	JACK BOARD ASSY	Fig.1-3-4	2(S⑪) ☆CN Ⓛ	–
⑫	JUNC. BOARD ASSY		(S⑫a), 2(S⑫b) ☆CN Ⓜ, Ⓝ, Ⓞ, Ⓟ	NOTE⑫
⑬	MAIN BOARD ASSY		(S⑬a), 2(S⑬b), (L⑬) SHIELD CASE ☆CN Ⓠ, Ⓡ, Ⓢ	–
⑭	MECHANISM ASSY		2(S⑭), 2(L⑭) HOLDER(M) ASSY	–

Table 1-3-6

CONN. No.	CONNECTOR					Pin No.
Ⓛ	JACK	CN501	⟺	MAIN	CN102	22
Ⓜ	MAIN	CN113	⟺	JUNCTION	CN571	33
Ⓝ	JUNCTION	CN574	⟺	LOADING MOTOR		6
Ⓞ	JUNCTION	CN573	⟺	DRUM MOTOR		11
Ⓟ	JUNCTION	CN572	⟺	SENSOR		15
Ⓠ	MAIN	CN110	⟺	HEAD		8
Ⓡ	MAIN	CN112	⟺	CAPSTAN MOTOR		18
Ⓢ	MAIN	CN111	⟺	ROTARY ENCODER		6

Table 1-3-7

Note⑫: *When removing, first disconnect the connectors Ⓜ, Ⓝ and Ⓞ, next remove the screws. Then, open the board assembly and disconnect the connector Ⓟ on the back side.*

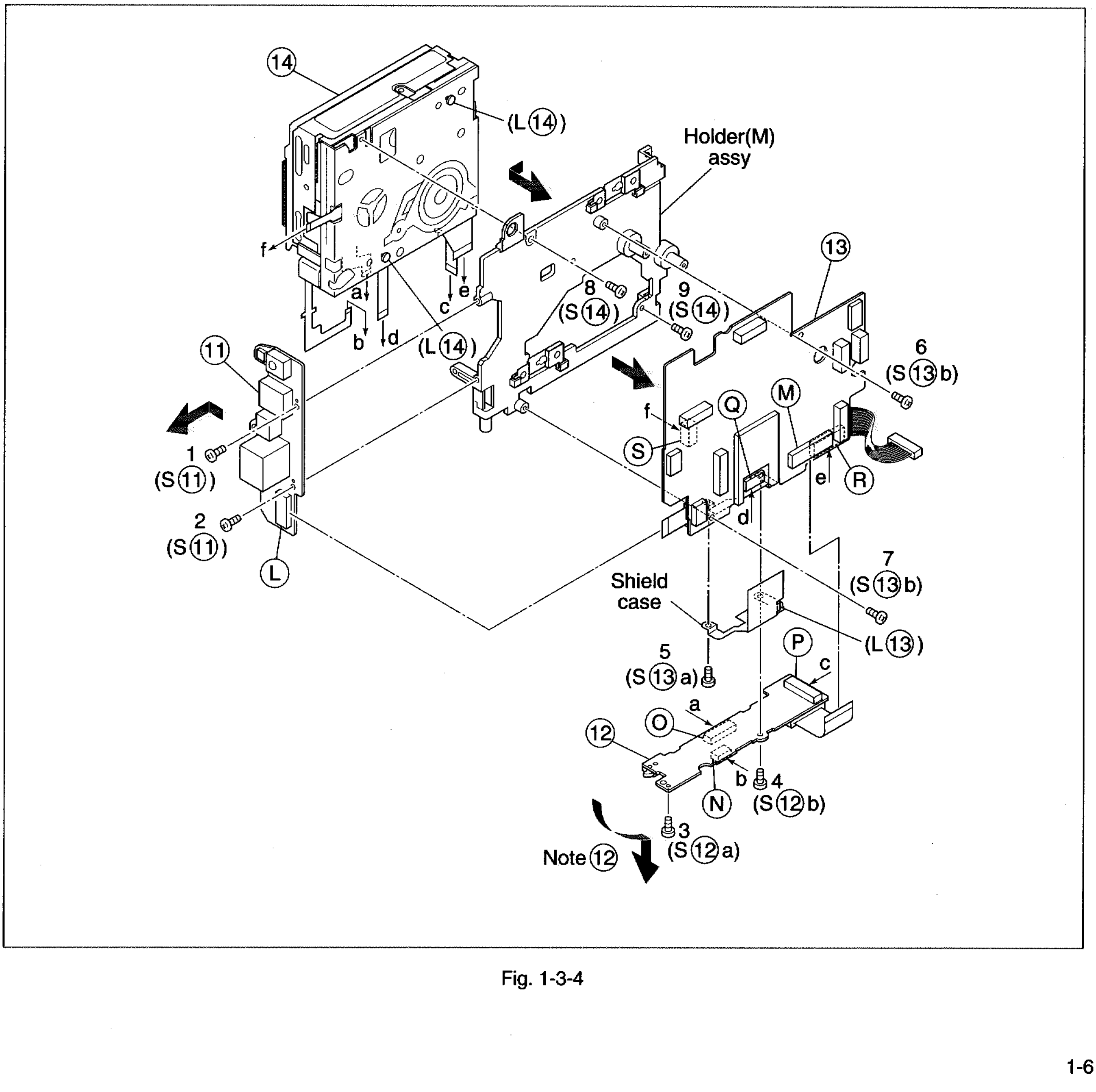

⑭
(L⑭)
Holder(M) assy
f
a
e
c
b
d
(L⑭)
8
(S⑭)
9
(S⑭)
⑬
6
(S⑬b)
⑪
1
(S⑪)
2
(S⑪)
Ⓛ
f
Ⓠ
Ⓜ
Ⓢ
e
Ⓡ
d
7
(S⑬b)
Shield case
(L⑬)
5
(S⑬a)
Ⓟ
c
a
Ⓞ
⑫
b
4
Ⓝ
(S⑫b)
3
(S⑫a)
Note⑫

Fig. 1-3-4

1.4 ⑧DISASSEMBLY/ASSEMBLY OF MONITOR ASSEMBLY

Note: *The shape of the monitor assembly varies by the size of the LCD screen.*
For the 2.5"-type LCD, refer to Fig. 1-4-1.

1.4.1 Disassembly/assembly of monitor assembly (for 2.5"-type LCD)

Note: *Be careful not to soil or scratch the monitor screen through the disassembly/assembly work.*

1. Remove the four screws ① to ④ in numerical order. While disengaging the six hooks (L④a to L④f) in alphabetical order, remove the monitor cover assembly.
2. Unlock the connector ⓐ and then disconnect the FPC while lifting the hinge assembly upwards to remove it together with the FPC.

Note④a: *For disconnecting the FPC, unlock the connector first and then lift the hinge assembly upwards. Accordingly, the FPC is disconnected together with the hinge assembly.*

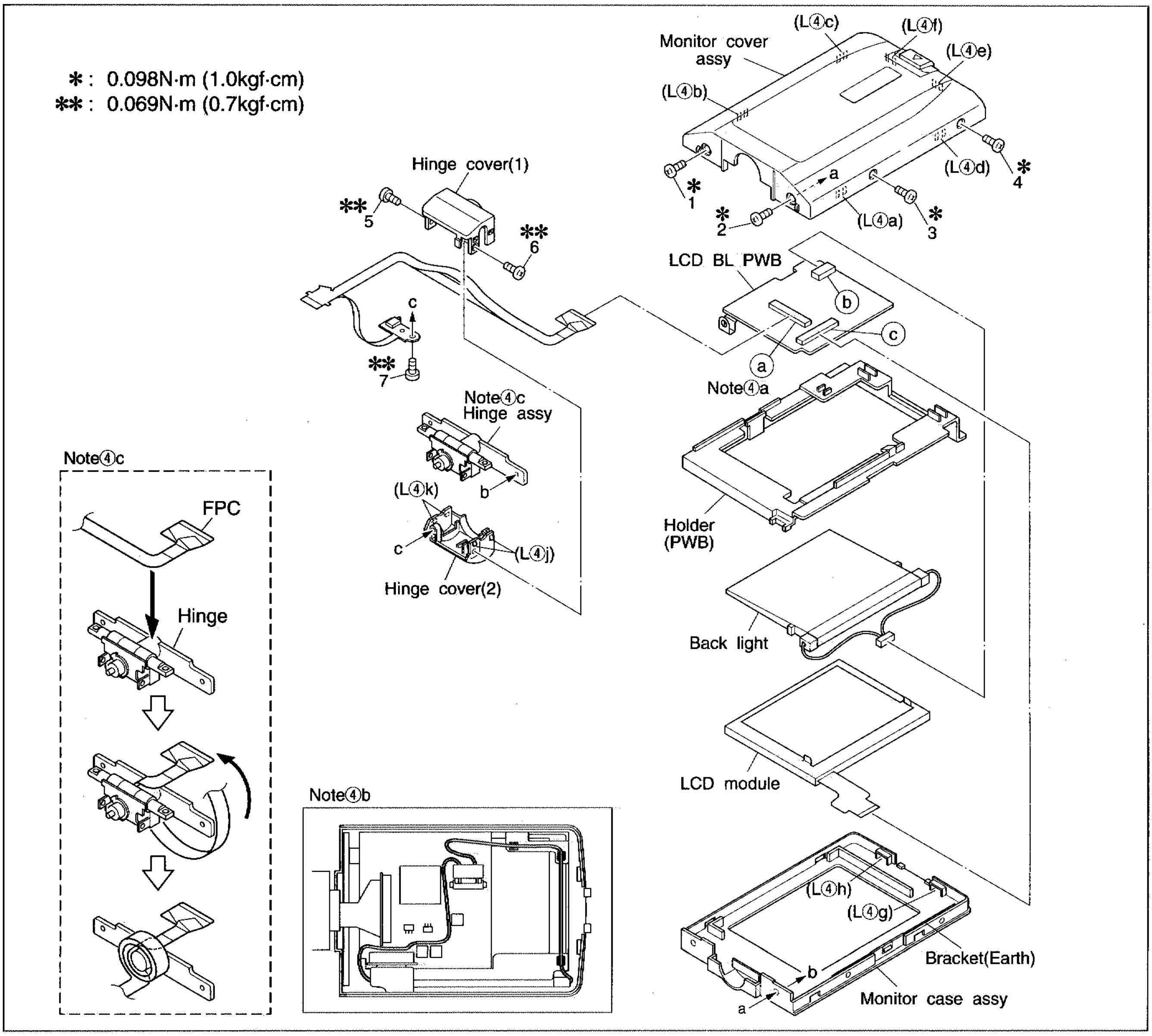
3. Disconnect the wire and FPC from the two connectors ⓑ, ⓒ, and then remove the MONITOR BL board assembly, holder (PWB) and backlight together.
4. Remove the LCD module while disengaging it from the two hooks (L④g, L4h).

1.4.2 Disassembly/assembly of hinge assembly (for 2.5"-type LCD)

1. Remove the one screw ⑤ first, and then remove the two screws ⑥, ⑦ after removing the SW board assembly. While disengaging the four hooks (L④j, L④k) in both sides, remove the hinge cover (1) and (2).
2. Disconnect the FPC from the hinge assembly.

Note④b: *When disassembling/assembling the hinge assembly, pay careful attention to every part not to damage anything.*

Note④c: *When connecting the FPC, arrange the FPC wire by winding it around the shaft (hinge pin) of the hinge assembly by two and a half turns while paying heed to the orientation of the hinge assembly and FPC.*



*: 0.098N·m (1.0kgf·cm)
**: 0.069N·m (0.7kgf·cm)
Monitor cover assy
(L④c)
(L④f)
(L④e)
(L④b)
(L④d)
(L④a)
a
* 1
* 2
* 3
* 4
Hinge cover(1)
** 5
** 6
** 7
c
LCD BL PWB
ⓑ
ⓒ
ⓐ
Note④a
Note④c
Hinge assy
(L④k)
b
c
(L④j)
Hinge cover(2)
Holder (PWB)
Back light
LCD module
(L④h)
(L④g)
Bracket(Earth)
Monitor case assy
b
a
Note④c
FPC
Hinge
Note④b

Fig. 1-4-1

Note: *The shape of the monitor assembly varies depending on the size of the LCD screen.*

For the 3"/3.5"-type LCD, refer to Fig. 1-4-2.

1.4.3 Disassembly/assembly of monitor assembly (for 3"/3.5"-type LCD)

Note: *Be careful not to soil or scratch the monitor screen through the disassembly/assembly work.*

1. Remove the four screws ① to ④ in numerical order. While disengaging the six hooks (L④a to L④f) in alphabetical order, open the monitor cover assembly and remove it after disconnecting the FPC from the connector ⓐ.

Note④d: *When removing the monitor cover assembly, be careful not to damage the FPC and connector.*

2. Unlock the connector ⓑ and then disconnect the FPC while lifting the hinge assembly upwards to remove it together with the FPC.

Note④e: *For disconnecting the FPC, unlock the connector first and then lift the hinge assembly upwards. Accordingly, the FPC is disconnected together with the hinge assembly.*

3. Disconnect the wire and FPC from the two connectors ⓒ, ⓓ, and then remove the MONITOR BL board assembly, holder (PWB) and backlight together.
4. Remove the LCD module while disengaging it from the four hooks (L4g to L4k).

Note④f: *The holder (LCD) is used for the 3"-type monitor assembly only.*

1.4.4 Disassembly/assembly of hinge assembly (for 3"/3.5"-type LCD)

1. Remove the one screw ⑤ first, and then remove the two screws ⑥, ⑦ after removing the SW board assembly. While disengaging the four hooks (L④j, L④k) in both sides, remove the hinge cover (1) and (2).
2. Disconnect the FPC from the hinge assembly.

Note④g: *When disassembling/assembling the hinge assembly, pay careful attention to every part not to damage anything.*

Note④h: *When connecting the FPC, arrange the FPC wire by winding it around the shaft (hinge pin) of the hinge assembly by two and a half turns while paying heed to the orientation of the hinge assembly and FPC.*

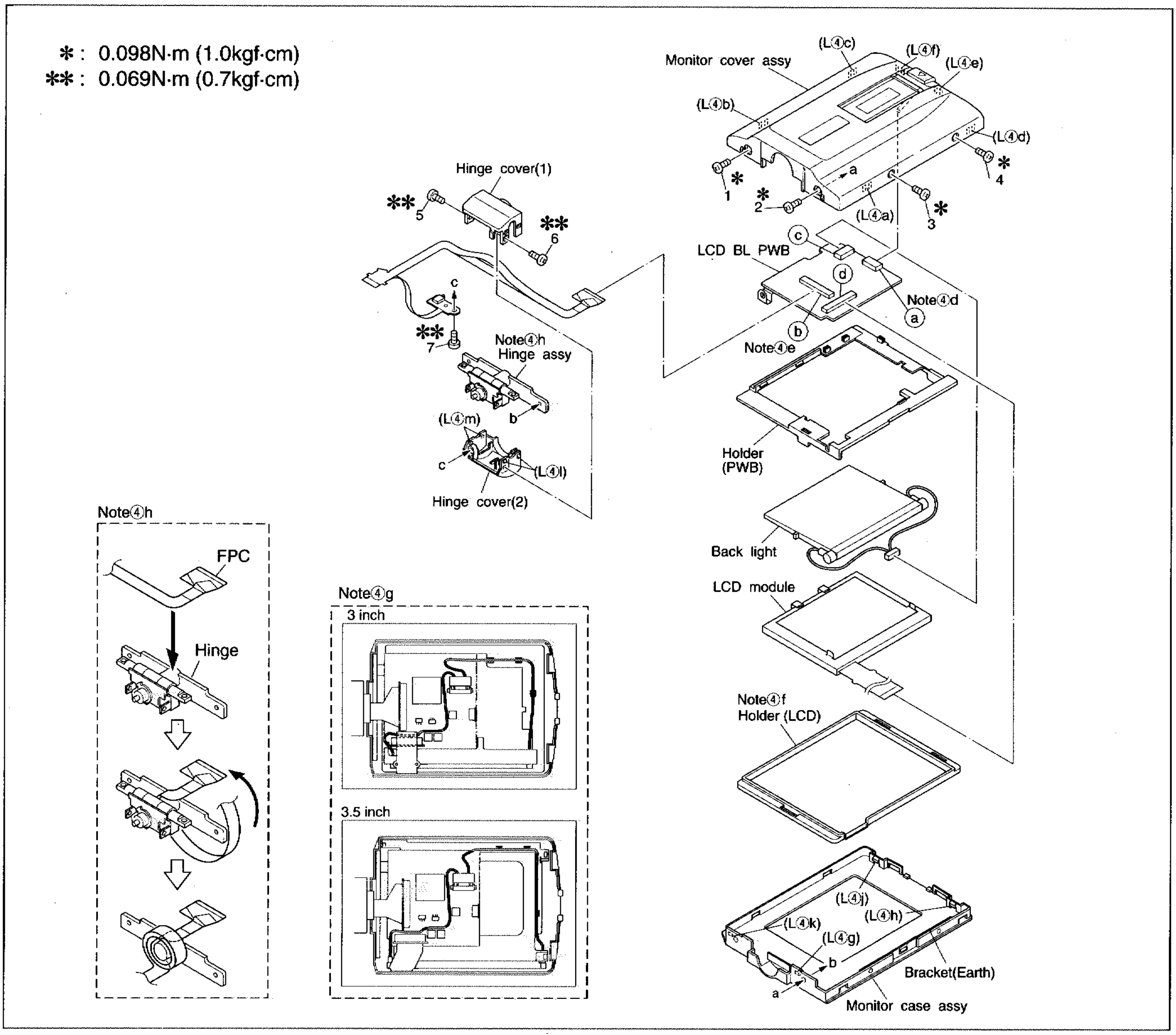

*: 0.098N·m (1.0kgf·cm)
**: 0.069N·m (0.7kgf·cm)
Monitor cover assy
(L④c)
(L④f)
(L④e)
(L④b)
(L④d)
a
*
1
*
2
(L④a)
*
3
*
4
Hinge cover(1)
**
5
**
6
LCD BL PWB
ⓒ
ⓓ
Note④d
ⓐ
ⓑ
Note④e
c
**
7
Note④h
Hinge assy
(L④m)
b
c
(L④l)
Hinge cover(2)
Holder (PWB)
Back light
LCD module
Note④f
Holder (LCD)
(L④j)
(L④h)
(L④k)
(L④g)
b
a
Bracket(Earth)
Monitor case assy
Note④h
FPC
Hinge
Note④g
3 inch
3.5 inch

Fig. 1-4-2

1.5 ⑨E. VF ASSEMBLY

Note: *The shape of the E. VF assembly varies by the type of the viewfinder (B/W, color VF).*
For the B/W VF, refer to Fig. 1-5-1.

1.5.1 Disassembly/assembly of E. VF assembly (for B/W VF)

Note: *Place the E. VF assembly with the VF case (upper) assembly down through the disassembly/assembly work.*

1. First remove the two screws (1, 2), next remove the eyepiece assembly.
2. Remove the two screws (3, 4), and disengage the two hooks (L⑤a, L⑤b) in both sides while extending the VF case (upper) assembly by one side. Accordingly, the VF case (lower) can be removed.

Note⑤a: *When reassembling, install the VF case (lower) paying careful attention to the FPC so that it is not caught in the hinge assembly of the VF case (lower) when the hinge assembly is folded down.*

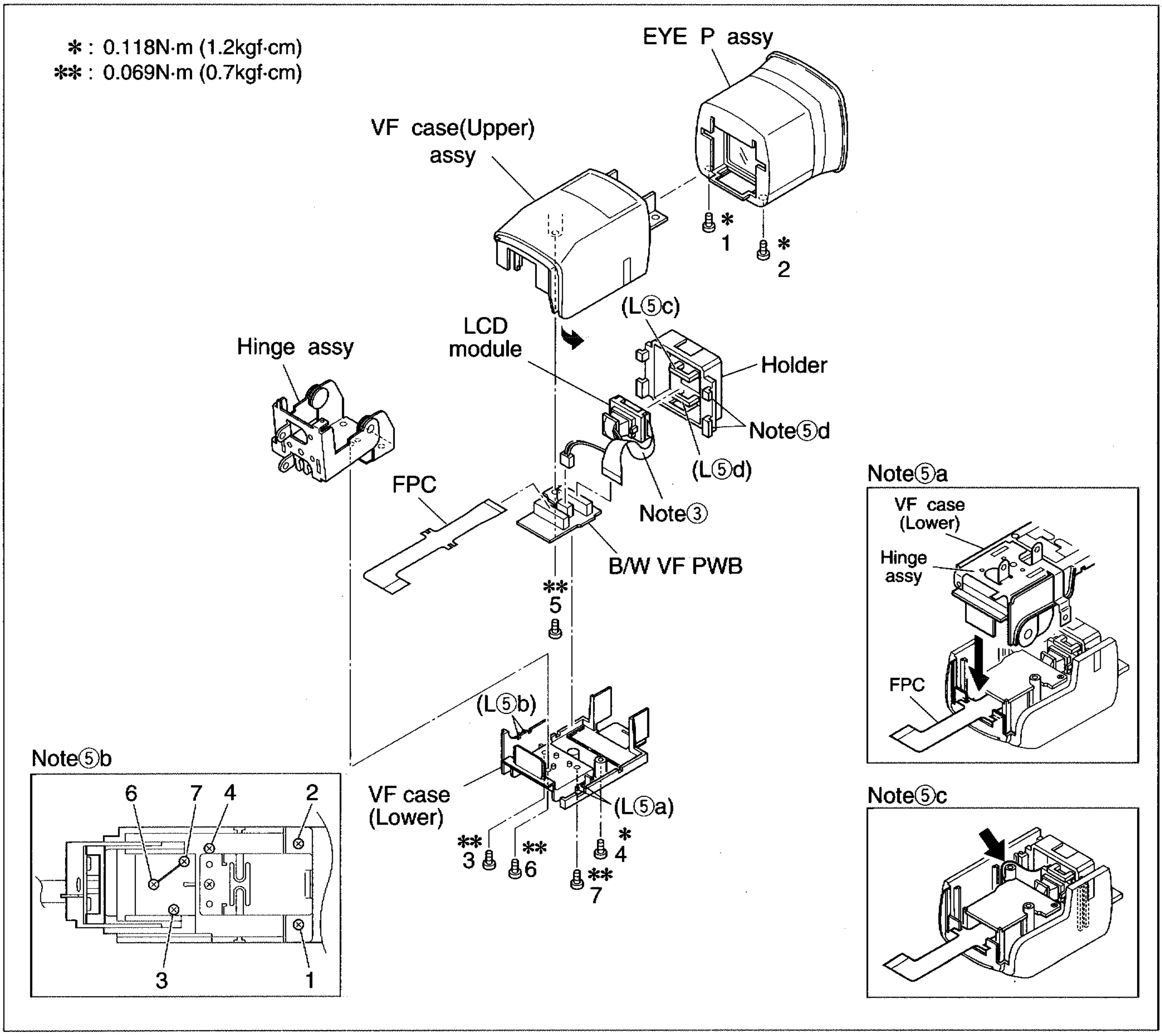
Note⑤b: *Don't remove the hinge assembly fastened to the VF case (lower) with the screws unreasonably except for replacement. For removing the hinge assembly for replacement, remove the two screws (6, 7). When installing a new hinge assembly, be sure not to use the screws that were once removed but to use new screws to fasten it.*

3. Remove the one screw (5) and remove the board assembly, LCD module and holder together.

Note⑤c: *When reassembling, set the holder in the groove and fasten the board assembly with the screw while arranging the FPC carefully.*

4. Disconnect the FPC and wire, and then remove the LCD module.
5. Remove the holder while disengaging it from the two hooks (L⑤c, L⑤d).

Note⑤d: *When reassembling, pay careful attention to the vertical orientation.*



*: 0.118N·m (1.2kgf·cm)
**: 0.069N·m (0.7kgf·cm)
EYE P assy
VF case(Upper) assy
1 *
2 *
(L⑤c)
Hinge assy
LCD module
Holder
Note⑤d
(L⑤d)
FPC
Note③
B/W VF PWB
** 5
(L⑤b)
VF case (Lower)
(L⑤a)
** 3
** 6
* 4
** 7
Note⑤b
6
7
4
2
3
1
Note⑤a
VF case (Lower)
Hinge assy
FPC
Note⑤c

Fig. 1-5-1

1.5.2 Disassembly/assembly of E. VF assembly (for color VF)

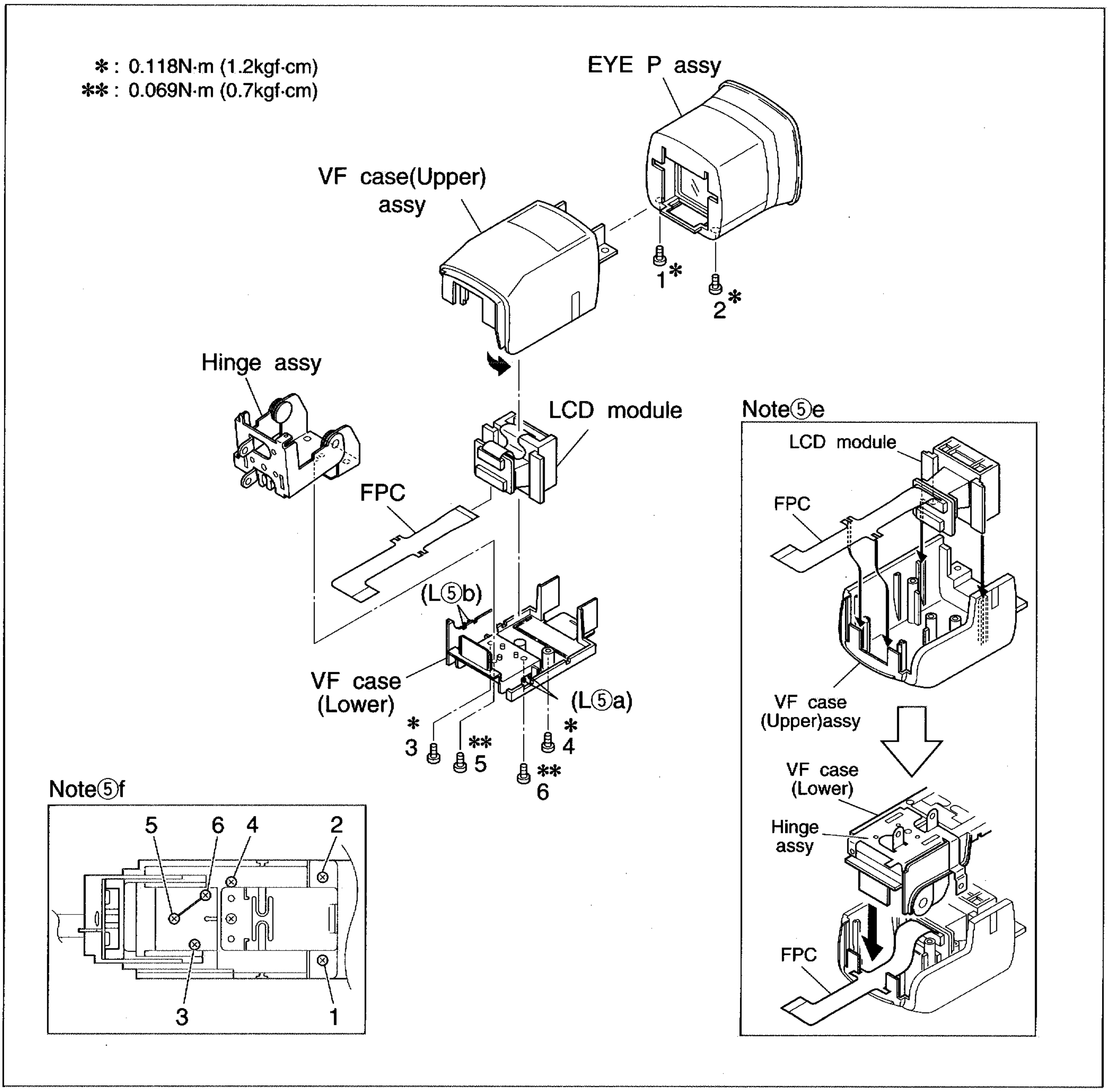
Note: *Place the E. VF assembly with the VF case (upper) assembly down through the disassembly/assembly work.*

1. Remove the two screws (1, 2) and then remove the eyepiece assembly.
2. While extending the VF case (upper) by one side, disengage the two hooks (L⑤a, L⑤b) and remove the VF case (lower).

Note⑤e: *When reassembling, first set the LCD assembly and FPC in the VF case (upper), next install the VF case (lower) paying careful attention to the FPC so that it is not caught in the hinge assembly of the VF case (lower) when the hinge assembly is folded down.*

Note⑤f: *Don't remove the hinge assembly fastened to the VF case (lower) with the screws unreasonably except for replacement. For removing the hinge assembly for replacement, remove the two screws (6, 7). When installing a new hinge assembly, be sure not to use the screws that were once removed but to use new screws to fasten it.*

3. Remove the LCD assembly and FPC assembly.



✱ : 0.118N·m (1.2kgf·cm)
✱✱ : 0.069N·m (0.7kgf·cm)
EYE P assy
VF case(Upper) assy
1✱
2✱
Hinge assy
LCD module
FPC
(L⑤b)
VF case (Lower)
(L⑤a)
✱ 3
✱✱ 5
✱ 4
✱✱ 6
Note⑤f
5
6
4
2
3
1
Note⑤e
LCD module
FPC
VF case (Upper)assy
VF case (Lower)
Hinge assy
FPC

Fig. 1-5-2

1.6 DISASSEMBLY OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY

1.6.1 Precautions

1. Through the disassembly/assembly work, carefully handle the CCD image sensor, optical LPF, lens, and so on paying the closest attention to the surface of each part so as to prevent it from getting soiled, dusty or scratched. If some of them gets soiled with fingerprints, etc., wipe it out with silicone paper, clean chamois, or super cleaning cloth recommended by JVC, or the like.
2. The new CCD image sensor is occasionally shipped from the factory as a protection seal is applied onto its transparent glass. If so, leave the protection seal as it is and remove it just before installing the CCD image sensor into the OP block assembly.
3. The orientation of the optical LPF is an important factor for installation. If there is some marking on the LPF, be sure to note it down before removing and to reassemble it very carefully as it was referring to the marking.

1.6.2 How to remove CCD board assembly and CCD base assembly

1. Unsolder the CCD board assembly by the 14 points (SD1) and then remove it.
2. Remove the two screws (1, 2) and remove the CCD base assembly.

Note⑥a: *When removing the CCD base assembly, pay heed to the CCD image sensor because the spacer rubber and optical LPF are occasionally removed together with the CCD image sensor.*

Note⑥b: *When replacing the CCD image sensor, don't replace it individually but replace the CCD base assembly in whole with a new one.*

1.6.3 How to assemble CCD base assembly and CCD board assembly

1. Install the optical LPF with the spacer rubber attached to its CCD side in the OP block assembly.

Note⑥c: *Pay careful attention to the orientation of the LPF.*

2. Set the CCD base assembly with careful attention to the spacer rubber not to come off the right position, and fasten them together with the two screws (1, 2).
3. Set the CCD board assembly in the CCD base assembly, and then solder it by the 14 points (SD1).

Note⑥d: *When soldering the FPC wire to the terminal after replacement of the focus motor or zoom motor, be sure to keep the tip of a soldering iron approximately 1 mm apart from the terminal.*

Note⑥e: *The iris motor unit includes the FPC assembly and two sensors.*

1.6.4 Replacement of service parts

Service parts to be supplied for the OP block assembly are as follows.

When replacing a part, be very careful not to get the FPC wire broken or damaged by overheating in soldering.

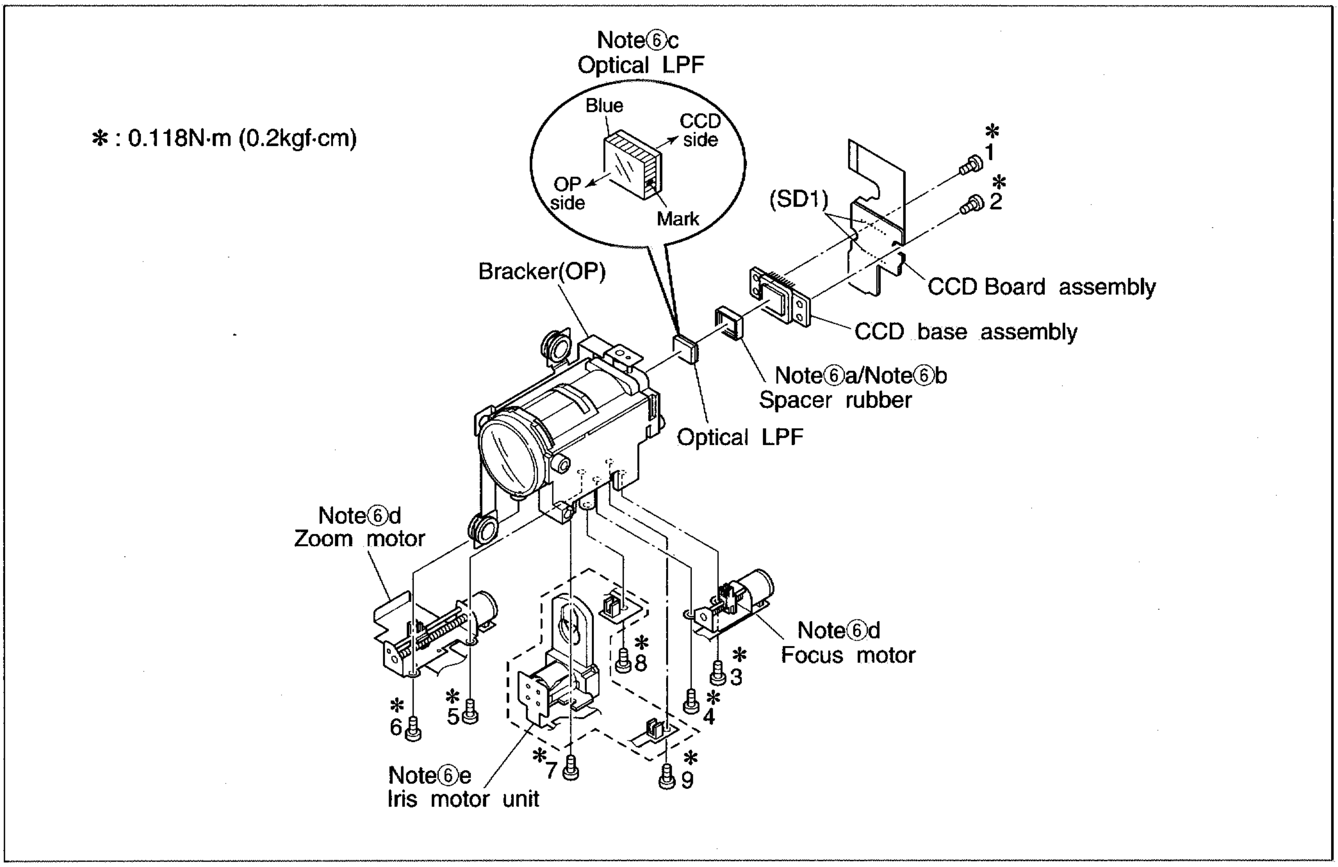


Fig. 1-6-1

1.7 CONNECTION OF CONNECTORS

<PATCH CORDS>

Note: *The patch cord No. ② is a new implement, which is to be used as a requisite for servicing this model as well as existing patch cords.*

	Connection						Pin No.	Parts Number
①	MAIN	CN107	↔	CCD			18	YTU94074-18 /YTU94077-18
②	MAIN	CN108	↔	OP BLOCK			24	YTU94074-24 /YTU94077-24
③	MAIN	CN114	↔	ZOOM OPE			15	YTU94074-15 /YTU94077-15
④	MONITOR	CN7604	↔	LCD BL	CN7501		33/32	YTU94129A-33 /YTU94109-33
⑤	JACK	CN501	↔	MAIN	CN102		22	YTU94074-22 /YTU94077-22
⑥	MAIN	CN111	↔	ROTARY ENCORDER			6	YTU94074-6 /YTU94077-6

Table 1-7-1

Note: *Since the label of the test point on the board does not correspond to that of the jig connector (CN105), refer to the following table when using the jig connector practically.*

Besides the patch cord No. ②, prepare existing patch cords depending on the situation.

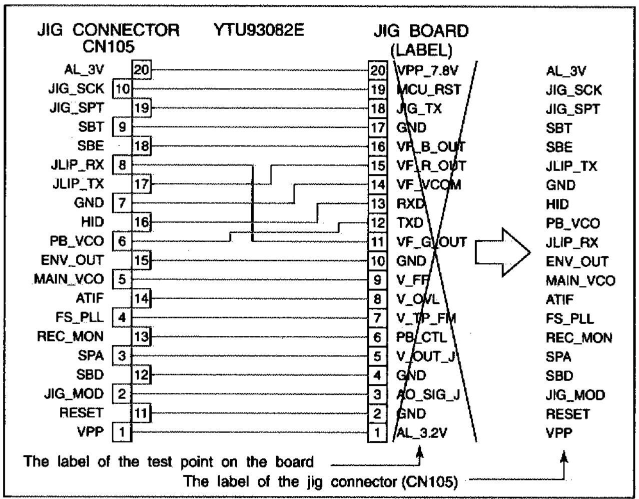

JIG CONNECTOR
CN105
YTU93082E
JIG BOARD
(LABEL)
AL_3V 20
JIG_SCK 10
JIG_SPT 19
SBT 9
SBE 18
JLIP_RX 8
JLIP_TX 17
GND 7
HID 16
PB_VCO 6
ENV_OUT 15
MAIN_VCO 5
ATIF 14
FS_PLL 4
REC_MON 13
SPA 3
SBD 12
JIG_MOD 2
RESET 11
VPP 1
20 VPP_7.8V
19 MCU_RST
18 JIG_TX
17 GND
16 VF_B_OUT
15 VF_R_OUT
14 VF_VCOM
13 RXD
12 TXD
11 VF_G_OUT
10 GND
9 V_FF
8 V_OVL
7 V_TP_FM
6 PB_CTL
5 V_OUT_J
4 GND
3 AO_SIG_J
2 GND
1 AL_3.2V
AL_3V
JIG_SCK
JIG_SPT
SBT
SBE
JLIP_TX
GND
HID
PB_VCO
JLIP_RX
ENV_OUT
MAIN_VCO
ATIF
FS_PLL
REC_MON
SPA
SBD
JIG_MOD
RESET
VPP
The label of the test point on the board
The label of the jig connector (CN105)

Table 1-7-2

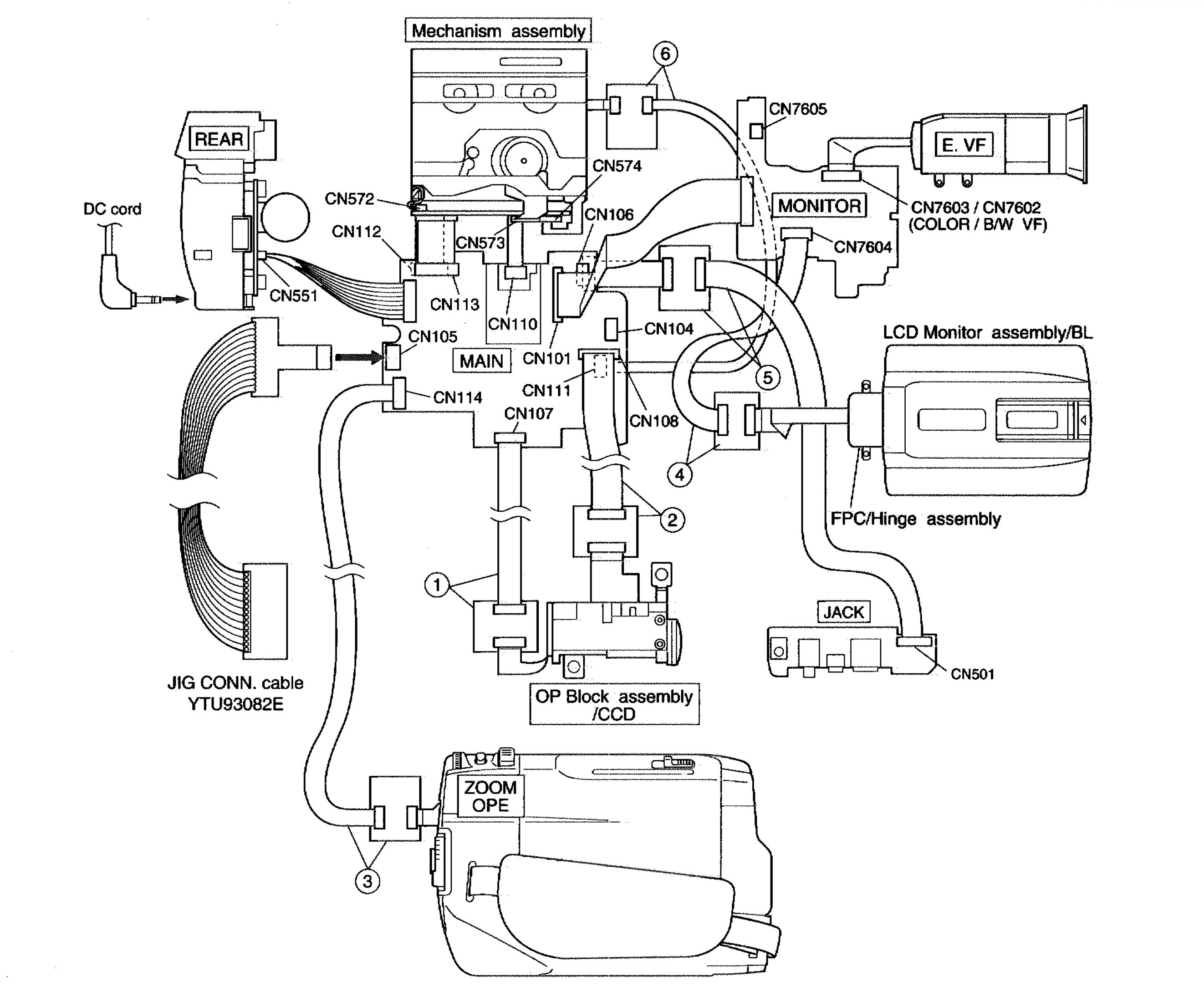

Mechanism assembly
⑥
REAR
DC cord
CN572
CN112
CN551
CN573
CN574
CN106
CN113
CN110
CN105
MAIN
CN101
CN104
CN114
CN111
CN107
CN108
CN7605
E. VF
MONITOR
CN7603 / CN7602
(COLOR / B/W VF)
CN7604
LCD Monitor assembly/BL
⑤
④
②
①
FPC/Hinge assembly
JACK
CN501
JIG CONN. cable
YTU93082E
OP Block assembly
/CCD
ZOOM
OPE
③

Fig. 1-7-1

1.8 SERVICE NOTE

Symbol No. →	①			②				③(⑧/⑨)							④			⑤		⑥			
Removing order of screw →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Place to stick screw →								*															
Reference drawing →	Fig.1-3-2																						
Screw tightening torque →	I																						

Symbol No. →	⑧		⑨			⑩			
Removing order of screw →	1	2	3	4	5	6	7	8	9
Place to stick screw →	*	*	*					*	*
Reference drawing →	Fig.1-3-3								
Screw tightening torque →	II		III						

Symbol No. →	⑪		⑫		⑬			⑭	
Removing order of screw →	1	2	3	4	5	6	7	8	9
Place to stick screw →									
Reference drawing →	Fig.1-3-4								
Screw tightening torque →	I								

	MONITOR ASSY						
Removing order of screw →	1	2	3	4	5	6	7
Place to stick screw →							
Reference drawing →	Fig.1-4-1,2						
Screw tightening torque →	III				IV		

	B/W VF ASSY						
Removing order of screw →	1	2	3	4	5	6	7
Place to stick screw →							
Reference drawing →	Fig.1-5-1						
Screw tightening torque →	V				IV		

	COLOR VF ASSY					
Removing order of screw →	1	2	3	4	5	6
Place to stick screw →						
Reference drawing →	Fig.1-5-2					
Screw tightening torque →	V				IV	

	OP BLOCK ASSY								
Removing order of screw →	1	2	3	4	5	6	7	8	9
Place to stick screw →									
Reference drawing →	Fig.1-6-1								
Screw tightening torque →	V								

<NOTES>

1) * : *Don't reuse the screw, because screw lock bond was applied to them.*

2) *Pay careful attention to tightning torque for each screw.*

I : 0.078N·m(0.8kgf·cm) II : 0.147N·m(1.5kgf·cm) III : 0.098N·m(1.0kgf·cm)
IV : 0.069N·m(0.7kgf·cm) V : 0.118N·m(1.2kgf·cm)

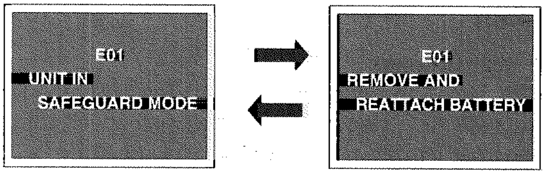
Table 1-8-1

1.9 EMERGENCY DISPLAY

Whenever some abnormal signal is input to the syscon CPU, an error number (E01, as an example) is displayed on the LCD monitor or (in the electronic view finder).
In every error status, such the message as shown below alternately appear over and over.

- In an emergency mode, all operations except turning on/ off the POWER switch are ineffectual.

Example (in case of the error number E01):



E01
UNIT IN
SAFEGUARD MODE

E01
REMOVE AND
REATTACH BATTERY

LCD display	Emergency mode	Details	Possible cause
E01	LOADING	In the case the encoder position is not shifted to the next point though the loading motor has rotated in the loading direction for 4 seconds or more. This error is defined as [E01].	1. The mechanism is locked during mode shift. 2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift. 3. No power is supplied to the loading MDA.
E02	UNLOADING	In the case the encoder position is not shifted to the next point though the loading motor has rotated in the unloading direction for 4 seconds or more. This error is defined as [E02].	1. The mechanism is locked during mode shift. 2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift.
E03	TU & SUP REEL FG	In the case no REEL FG is produced for 4 seconds or more in the capstan rotation mode after loading was complete, the mechanism mode is shifted to STOP with the pinch roller set off. This error is defined as [E03]. However, no REEL EMG is detected in the SLOW/STILL mode.	1. The idler gear does not engage with the reel disk well. 2. Though the idler gear and reel disk are engaged with each other, the tape is not wound because of overload to the mechanism. 3. No FG pulse is output from the reel sensor. 4. No power is supplied to the reel sensor. 5. Tape transport operation takes place with a cassette having no tape inside. 6. The tape slackens and no pulse is produced until the slack is taken up and the tape comes into the normal status.
E04	DRUM FG	In the case there is no DRUM FG input in the drum rotation mode for 4 seconds or more. This error is defined as [E04], and the mechanism mode is shifted to STOP with the pinch roller set off.	1. The drum cannot be started or drum rotation is stopped because tape transport load is too high. 1) Tape tension is extremely high. 2) The tape is damaged or soiled with grease, etc. 2. The DRUM FG signal is not received by the syscon CPU. 1) Disconnection in the middle of the signal line. 2) Failure of the DRUM FG pulse generator (hall element). 3. No drum control voltage is supplied to the MDA. 4. No power is supplied to the DRUM MDA.
E05	–	–	–
E06	CAPSTAN FG	In the case no CAPSTAN FG is produced in the capstan rotation mode for 2 seconds or more. This error is defined as [E06], and the mechanism mode is shifted to STOP with the pinch roller set off. However, no CAPSTAN EMG is detected in the STILL/FF/REW mode.	1. The CAPSTAN FG signal is not received by the syscon CPU. 1) Disconnection in the middle of the signal line. 2) Failure of the CAPSTAN FG pulse generator (MR element). 2. No capstan control voltage is supplied to the MDA. 3. No power is supplied to the CAPSTAN MDA. 4. The capstan cannot be started or capstan rotation is stopped because tape transport load is too high. 1) Tape tension is extremely high. (Mechanical locking) 2) The tape is damaged or soiled with grease, etc. (Tape tangling occurs, etc.)

(DVC_03)

Table 1-9-1

SECTION 2
MECHANISM ADJUSTMENT

2.1 PRELIMINARY REMARKS ON ADJUSTMENT AND REPAIR

2.1.1 Precautions

1. When fastening parts, pay careful attention to the tightening torque of each screw. Unless otherwise specified, tighten a screw with the torque of 0.039 N·m (0.4 kgf·cm).
2. Be sure to disconnect the set from the power supply before fastening and soldering parts.
3. When disconnecting/connecting wires, be careful not to get them and their connectors damaged. (Refer to the Section 1.)
4. When replacing parts, be very careful neither to damage other parts nor to fit wrong parts by mistake.

2.1.2 Necessary jigs

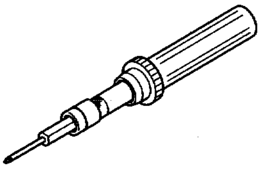
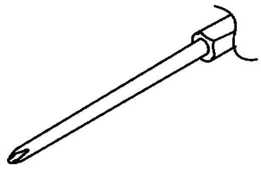
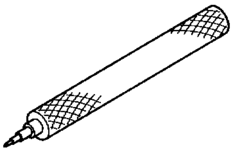
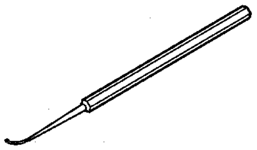
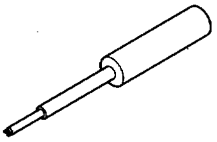
1 Torque driver YTU94088	2 Bit YTU94088-003
	
3 Slit washer fitting jig YTU94121A	4 Chip IC replacement jig PTS40844-2
	
5 Guide driver YTU94148A	
	

Fig. 2-1-1

2.1.3 Notes on procedure for disassemby/assembly

The disassembling procedure table (Table 2-2-2 on page 2-5, a part of the table is shown below for reference) shows the procedure to disassemble/reassemble mechanism parts. Carefully read the following explanation before starting actual disassembling/reassembling work. The item numbers (circled numbers) in the following explanation correspond to those appearing under respective columns of the table.

(1) Circled numbers appearing in this column indicate the order to remove parts. When reassembling, follow these numbers in the reverse order. Circled numbers in this column correspond to those appearing in drawings of this section.

(2) This column shows part names corresponding to circled numbers in the left column.

(3) The symbol (T or B) appearing in this column shows the side which the objective part is mounted on.
T = the upper side, B = the lower side

(4) Symbols appearing in this column indicate drawing numbers.

(5) This column indicates parts and points such as screws, washers, springs, and others to be removed/fitted for disassembling/reassembling the mechanism. Besides such the parts, this column occasionally indicates working points.
P = Spring
W= Washer
S = Screw
* = Lock (L), soldering (SD), shield, connector (CN), etc.

Example
- Remove (W1) = Washer W1.
- * Remove the solder at (SD1) = Point SD1.
- * Disconnect Ⓐ = Connector Ⓐ.

(6) Numbers in this column represent the numbers of notes in the text. For example, "1" means "Note 1".
(For parts that need phase adjustment after reassembling, refer to "2.2.7 Check and adjustment of mechanism phase".)

(7) This column indicates required after-disassembling/-reassembling work such as phase adjustment or mechanism adjustment.

Step	Part Name		Fig.	Point	Note	Remarks
Ⓐ Cassette housing assembly		T	Fig. 2-2-12	3(S1),(L1a)-(L1d)	1a, 1b, 1c, 1d	Adjustment
(2a)	Reel disk (SUP) assembly	T	Fig. 2-2-13	(W2)	2a, 2b	
(2b)	Reel disk (TU) assembly	T	Fig. 2-2-13	(W2)	2a, 2b	
(2c)	Reel cover assembly	T	Fig. 2-2-13	(S2b),2(S2a),(W2)	2d	
(3a)	Tension arm assembly	T	Fig. 2-2-14	(W3a)	3b	

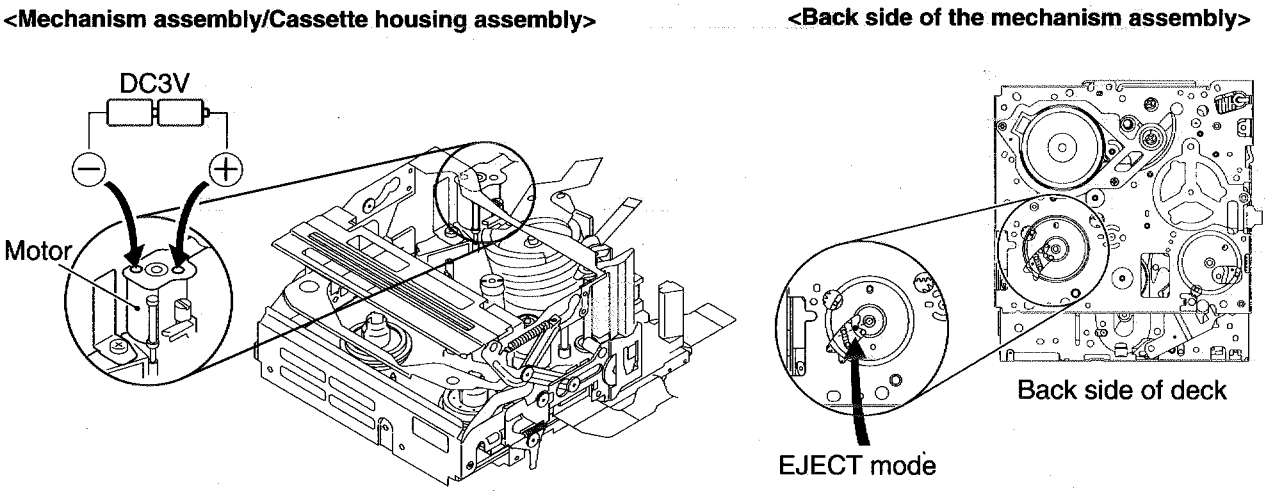
↑ ↑ ↑ ↑ ↑ ↑ ↑

(1) (2) (3) (4) (5) (6) (7)

2.2 DISASSEMBLY/ASSEMBLY OF MECHANISM ASSEMBLY

2.2.1 General statement

The mechanism should generally be disassembled/assembled in the EJECT mode (ASSEMBLY mode). (Refer to Fig. 2-2-1.)
However, when the mechanism is removed from the main body, it is set in the STOP mode. Therefore, it is required to shift the mechanism mode from the STOP mode to the EJECT mode after the mechanism is removed from the main body. In such the case, supply 3 V DC to the electrode on the top of the loading motor to enter the mechanism mode into the EJECT mode.



<Mechanism assembly/Cassette housing assembly>

<Back side of the mechanism assembly>

Fig. 2-2-1

2.2.2 Explanation of mechanism mode

The mechanism mode of this model is classified into six modes as shown in Table 2-2-1. Each mechanism mode can be distinguished from others by the relative position of "●" mark on the sub cam gear to the inner or outer protrusion on the main deck.

Refer to Fig. 2-2-2 to 2-2-7 below.
The EJECT mode, C IN mode and SHORT FF mode should be recognized by the relative position of the "●" mark to the inner protrusion, while the STOP mode, REV mode and PLAY mode should be recognized by that to the outer protrusion.

<EJECT mode>

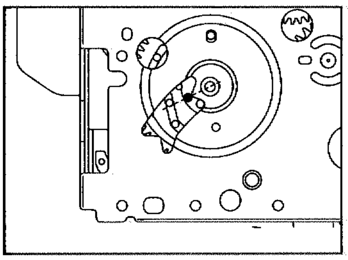


Fig. 2-2-2

<C IN mode>

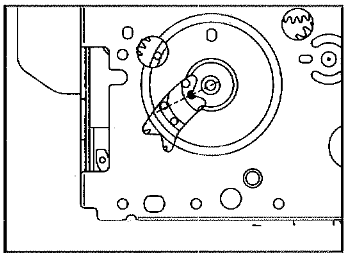


Fig. 2-2-3

<SHORT FF mode>

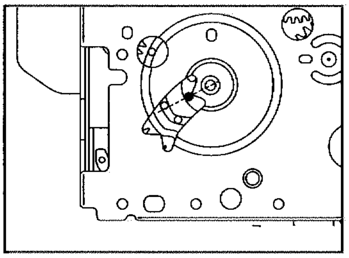


Fig. 2-2-4

<STOP mode>

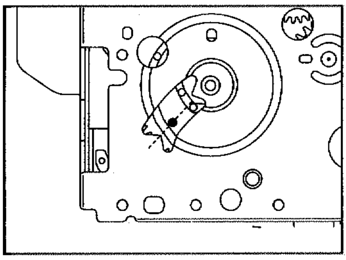


Fig. 2-2-5

<REV mode>

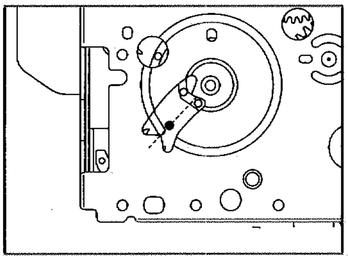


Fig. 2-2-6

<PLAY mode>

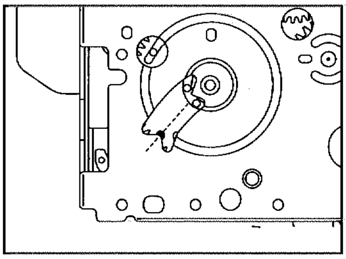


Fig. 2-2-7

2.2.3 Mechanism timing chart

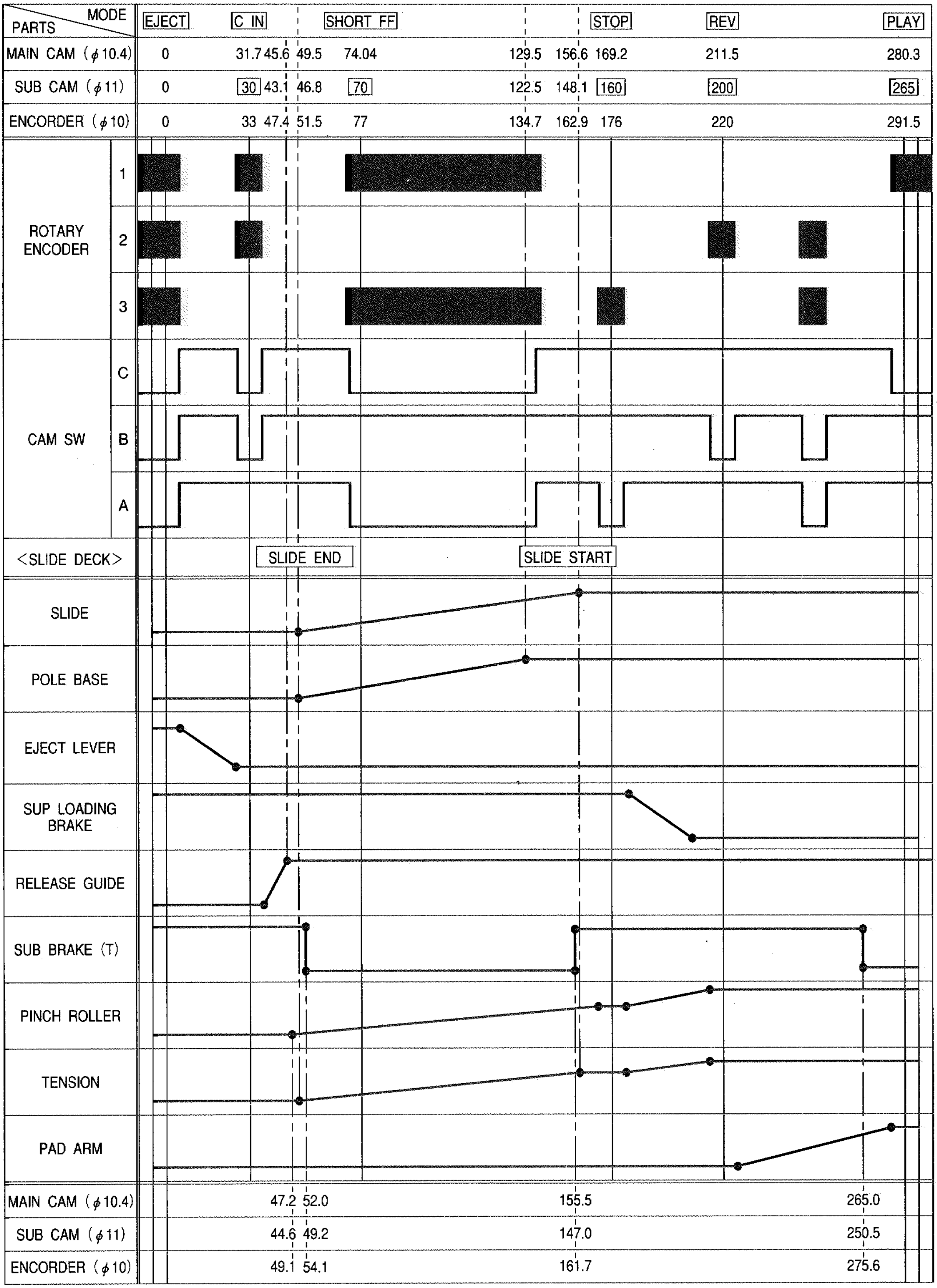


Table 2-2-1

2.2.4 Disassembly/assembly of mechanism assembly

1. Configuration

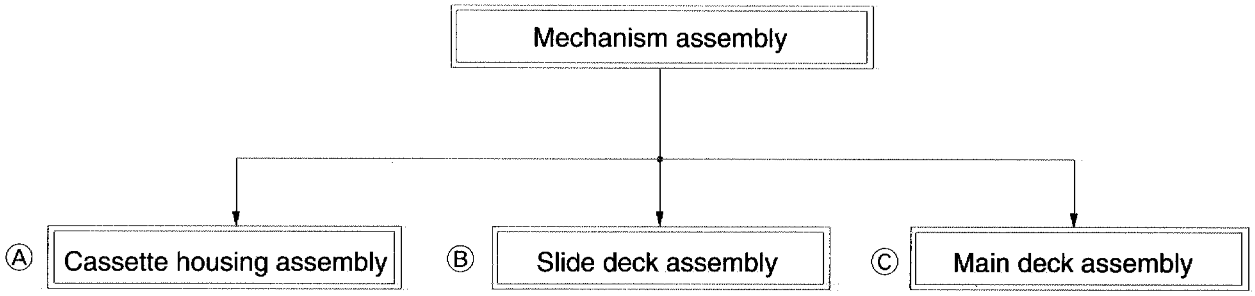

Mechanism assembly
Ⓐ Cassette housing assembly
Ⓑ Slide deck assembly
Ⓒ Main deck assembly

Fig. 2-2-8

2. Procedures for disassembly

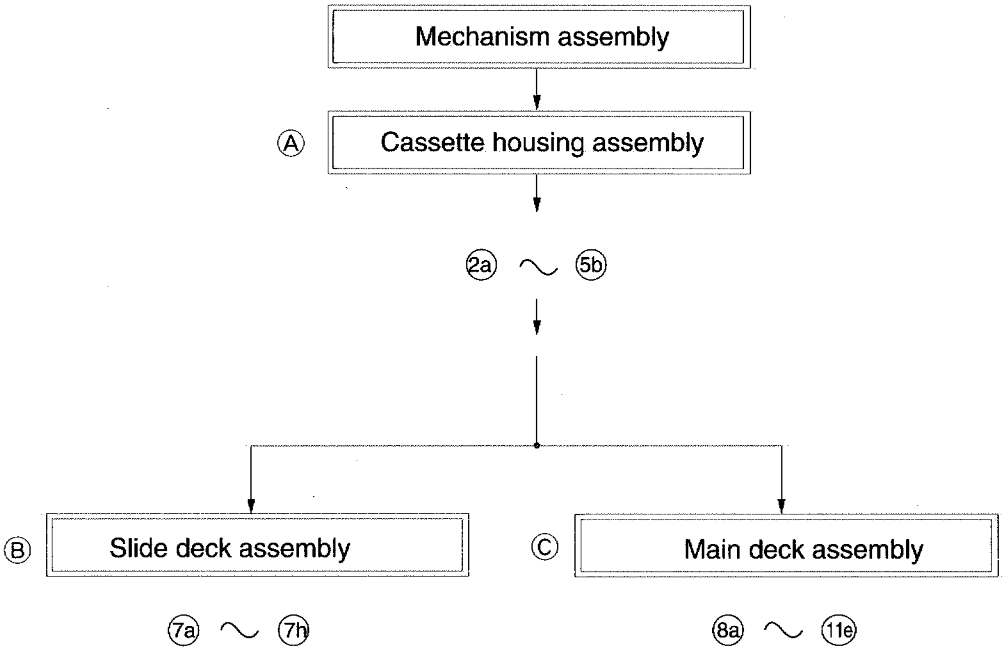

Mechanism assembly
Ⓐ Cassette housing assembly
(2a) 〜 (5b)
Ⓑ Slide deck assembly
Ⓒ Main deck assembly
(7a) 〜 (7h)
(8a) 〜 (11e)

Fig. 2-2-9

3. Disassembling procedure table

Step	Part Name		Fig.	Point	Note	Remarks
Ⓐ	Cassette housing assembly	T	Fig. 2-2-12	3(S1),(L1a)-(L1d)	1a, 1b, 1c, 1d	Adjustment
(2a)	Reel disk (SUP) assembly	T	Fig. 2-2-13	(W2)	2a, 2b	
(2b)	Reel disk (TU) assembly	T	Fig. 2-2-13	(W2)	2a, 2b	
(2c)	Reel cover assembly	T	Fig. 2-2-13	(S2b),2(S2a),(W2)	2d	
(3a)	Tension arm assembly	T	Fig. 2-2-14	(W3a)	3b	
(3b)	Release guide assembly	T	Fig. 2-2-14	-	3a	
(3c)	Idler arm assembly	T	Fig. 2-2-14	(W3b)	-	
(3d)	Guide arm assembly	T	Fig. 2-2-14	-	3a	
(3e)	Pinch roller arm assembly	T	Fig. 2-2-14	(W3a)	-	
(4a)	Cleaner arm assembly	T	Fig. 2-2-15	(L4a)	4a	
(4b)	Slant pole arm assembly	T	Fig. 2-2-15	(W4),(L4b),(P4a),(P4b)	4c	
(4c)	Drum assembly	T	Fig. 2-2-15	3(S4)	4b	
(5a)	Guide roller (S) assembly	T	Fig. 2-2-16	(P5)	5a, 5b	
(5b)	Rail assembly	T	Fig. 2-2-16	3(W5)	5c, 5d	
Ⓑ	Slide deck assembly / Ⓒ Main deck assembly	T	Fig. 2-2-17	(W6),(L6a)-(L6d)	6a, 6b	(Adjustment)
Ⓑ	Slide deck assembly					
(7a)	Loading brake assembly	T	Fig. 2-2-18	(W7),(L7a),(P7a)	7e	Adjustment
(7b)	Guide pin (SUPPLY)	T	Fig. 2-2-18	(S7a)	-	
(7c)	Pad arm assembly	T	Fig. 2-2-18	(W7),(L7b),(P7b)	7d	
(7d)	Slide guide plate assembly	T	Fig. 2-2-18	(S7b)	7c	Adjustment
(7e)	Collar	T	Fig. 2-2-18	-	7a	
(7f)	Collar	T	Fig. 2-2-18	-	7a	
(7g)	Sub brake assembly	T	Fig. 2-2-18	(W7),(L7c),(P7c)	7b	
(7h)	Control plate assembly	T	Fig. 2-2-18	2(W7),(L7d),(P7d)	7b	
Ⓒ	Main deck assembly					
(8a)	Tension lever assembly	T	Fig. 2-2-19	-	8c	
(8b)	Slide lever assembly	T	Fig. 2-2-19	-	8b	
(8c)	Brake control lever assembly	T	Fig. 2-2-19	-	8a	
(9a)	Loading guide	T	Fig. 2-2-20	(S9)	-	
(9b)	Timing belt	T	Fig. 2-2-20	-	9b	
(9c)	Center gear assembly	T	Fig. 2-2-20	-	-	
(9d)	Motor bracket assembly	T	Fig. 2-2-20	2(S9)	9a	
(9e)	Worm wheel	T	Fig. 2-2-20	(W9)	-	(Phase adjustment)
(9f)	Gear holder	T	Fig. 2-2-20	(S9)	-	
⑩a	Main cam gear	T	Fig. 2-2-21	(S10)	10b	Phase adjustment
(10b)	Brake control plate	T	Fig. 2-2-21	(L10)	10b	Phase adjustment
(10c)	Rotary encoder	T	Fig. 2-2-21	(S10),(W10a)	10a	Phase adjustment
(10d)	Connect gear	T	Fig. 2-2-21	(W10a)	-	(Phase adjustment)
(10e)	Reel drive pulley assembly	T	Fig. 2-2-21	(W10b)	-	
(11a)	Catcher (T) assembly	T	Fig. 2-2-22	2(S11)	-	
(11b)	Capstan motor	T	Fig. 2-2-22	2(S11)	-	
(11c)	Charge arm assembly	T	Fig. 2-2-22	(W11)	11	
(11d)	Sub cam gear	T	Fig. 2-2-22	(S11)	-	Phase adjustment
(11e)	PWB holder	B	Fig. 2-2-22	2(S11)	-	

Table 2-2-2

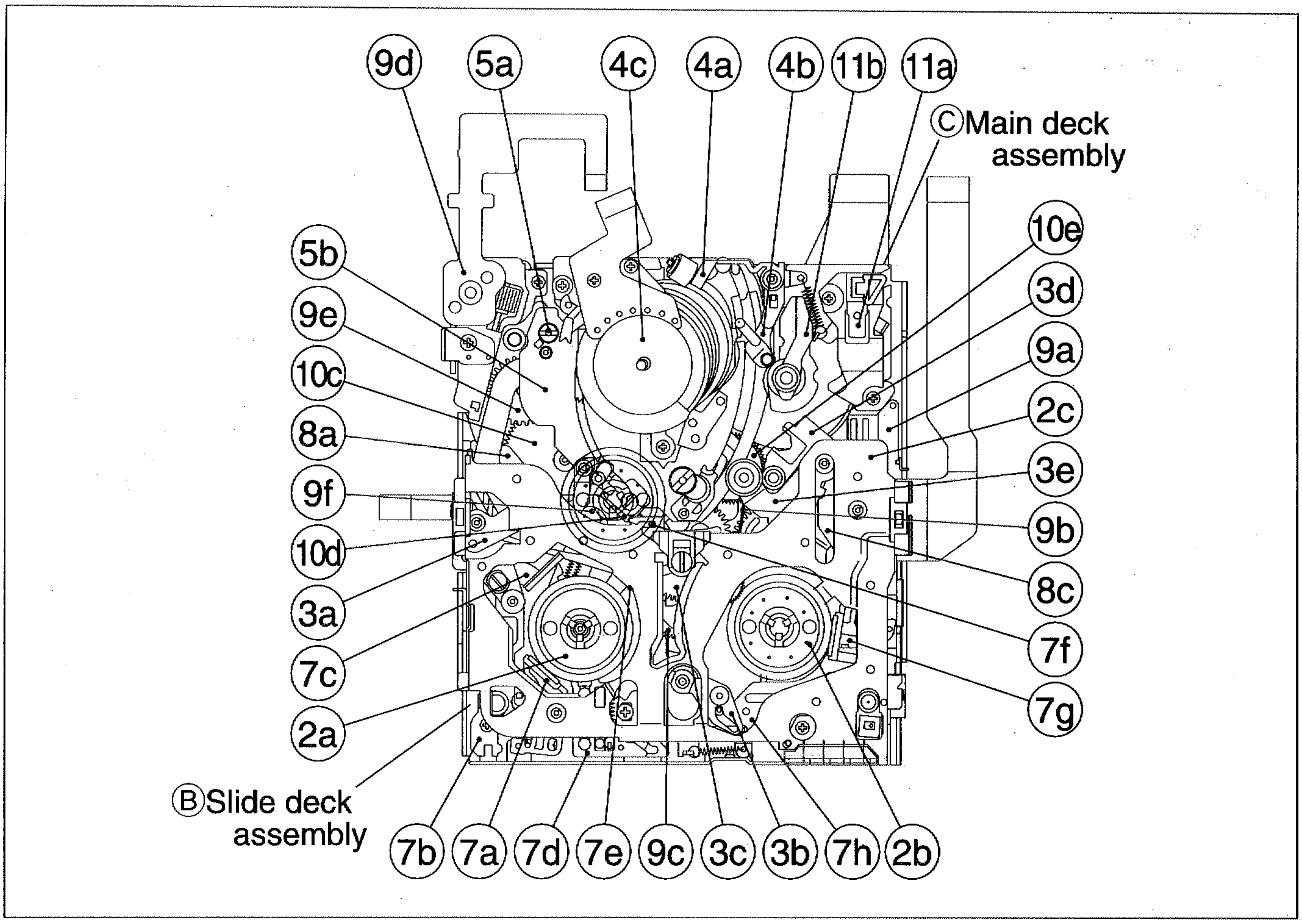

9d
5a
4c
4a
4b
11b
11a
Ⓒ Main deck assembly
5b
9e
10c
8a
9f
10d
3a
7c
2a
10e
3d
9a
2c
3e
9b
8c
7f
7g
Ⓑ Slide deck assembly
7b
7a
7d
7e
9c
3c
3b
7h
2b

Fig. 2-2-10 Top view

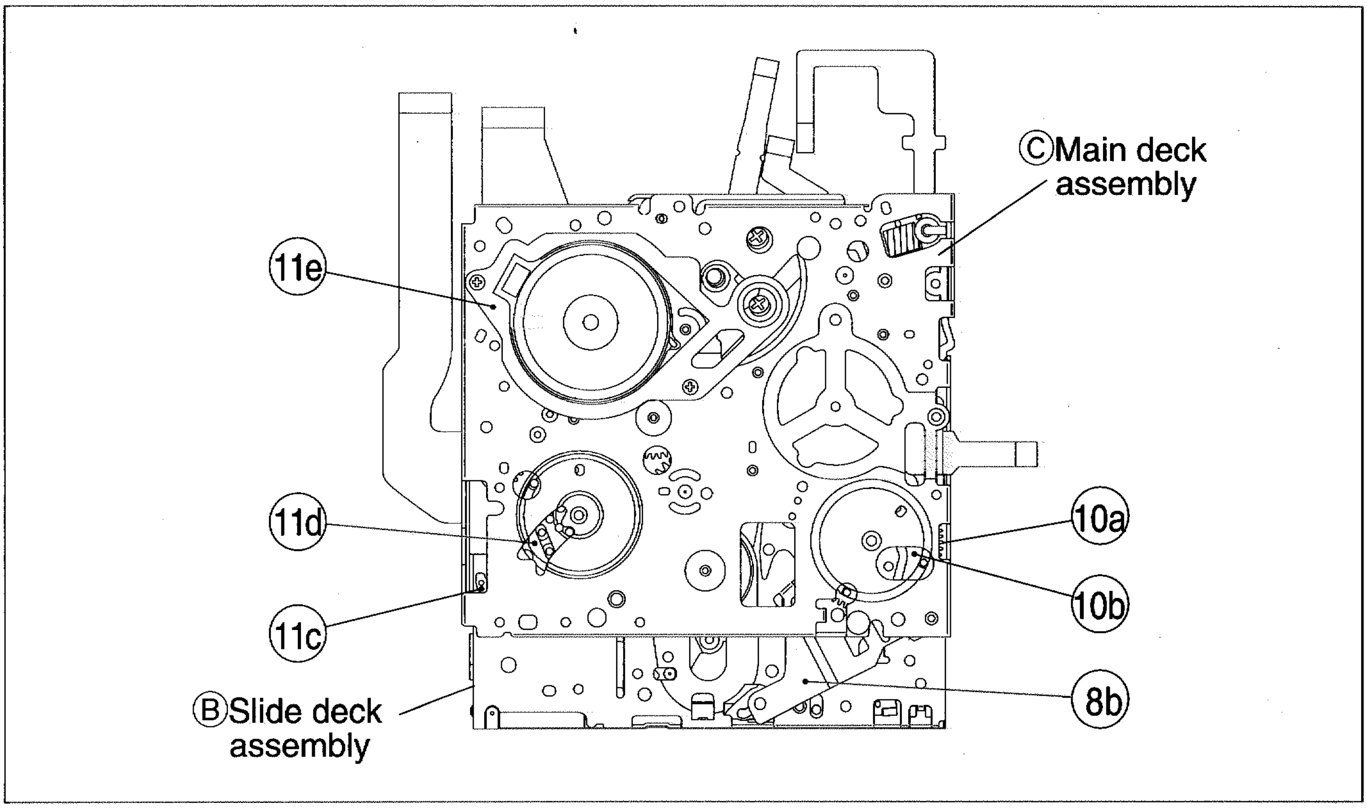

Ⓒ Main deck assembly
11e
11d
11c
Ⓑ Slide deck assembly
10a
10b
8b

Fig. 2-2-11 Bottom view

2.2.5 Disassembly/assembly

1. **Ⓐ Cassette housing assembly**

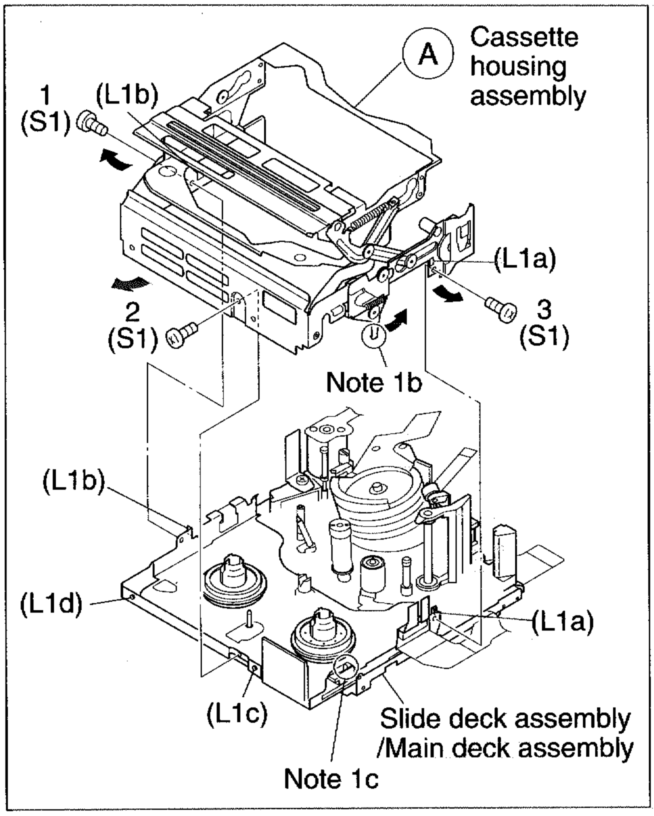
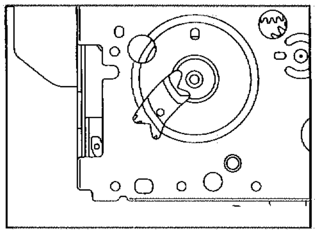
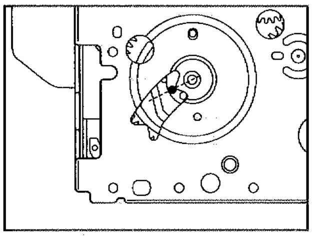

A
Cassette housing assembly
1
(L1b)
(S1)
(L1a)
2
(S1)
3
(S1)
Note 1b
(L1b)
(L1d)
(L1a)
(L1c)
Slide deck assembly /Main deck assembly
Note 1c

Fig. 2-2-12

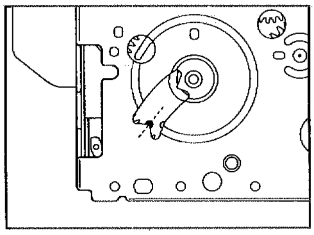
<STOP mode>



<EJECT mode>



<PLAY mode>



Note 1a:
Shift the mechanism mode from the STOP mode to the EJECT mode.

Note 1b:
Reassemble the cassette housing assembly to the mechanism as the cancel lever is moved in the direction of the arrow.

Note 1c:
When reassembling the cassette housing to the mechanism, make sure that there is no deformation in the frame or no damage to the switches, etc.

Note 1d:
After reassembling the component parts, check the mechanism operation in the PLAY mode.
For details of checking method, refer to "2.2.8 assembling slide deck assembly and main deck assembly".

2. **(2a) Reel disk (SUP) assembly**
   (2b) Reel disk (TU) assembly
   (2c) Reel cover assembly

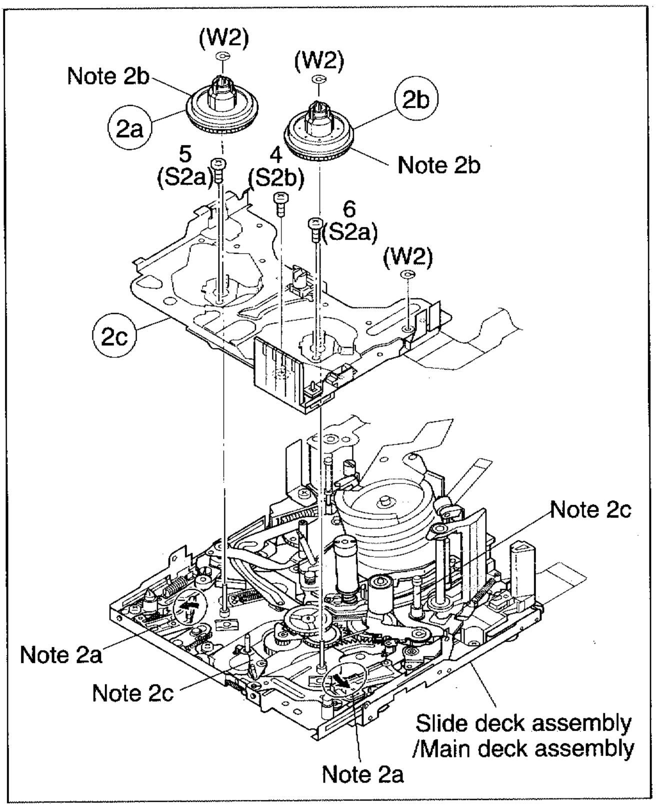
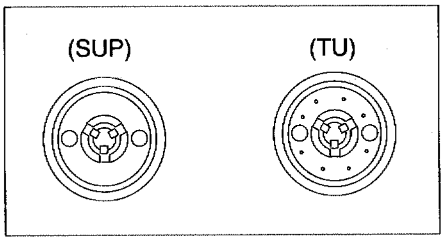

(W2)
(W2)
Note 2b
2b
2a
5
(S2a)
4
(S2b)
Note 2b
6
(S2a)
(W2)
2c
Note 2c
Note 2a
Note 2c
Slide deck assembly /Main deck assembly
Note 2a

Fig. 2-2-13

Note 2a:
When removing the reel disk assembly, be careful not to break the brake pad which applies lateral pressure to the reel disk.

Note 2b:
Be careful not to make a mistake in installing the reel disk. The SUP reel disk and TU reel disk can be distinguished from each other by the appearance as shown below.



Note 2c:
When removing the reel cover assembly, pay heed to the guide arm assembly. For, the guide arm assembly is just inserted into the slide deck assembly from the upside and it is apt to come off after the reel cover assembly is removed.

Note 2d:
When fitting the reel cover assembly to the set, carefully tighten the screw with the specified tightening torque of 0.068N·m (0.7kgf·cm).

3.(3a)Tension arm assembly/(3b)Release guide assembly (3c)Idler arm assembly/(3d)Guide arm assembly (3e) Pinch roller arm assembly

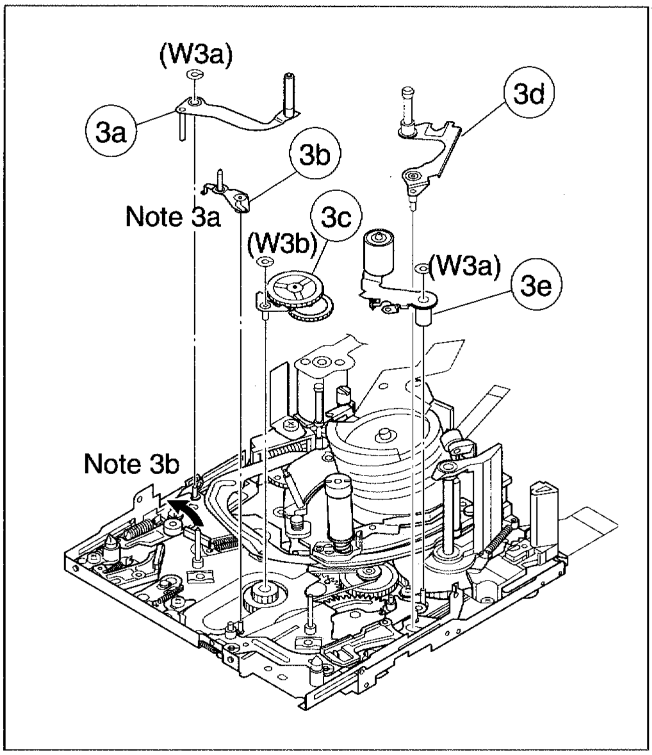
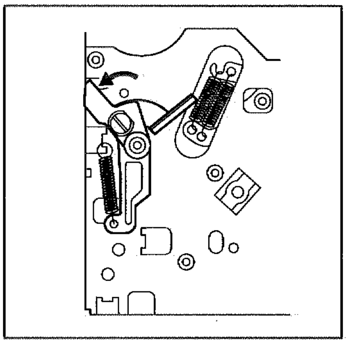


Fig. 2-2-14

Note 3a:
When removing the reel cover assembly, pay heed to release guide assembly and guide arm assembly. For, the guide arm assembly is just inserted into the slide deck assembly from the upside and it is apt to come off after the reel cover assembly is removed.

Note 3b:
Reassemble the tension arm assembly to the mechanism as the pad arm assembly is moved to the extent in the direction of the arrow.



4.(4a)Cleaner arm assembly/(4b) Slant pole arm assembly (4c)Drum assembly

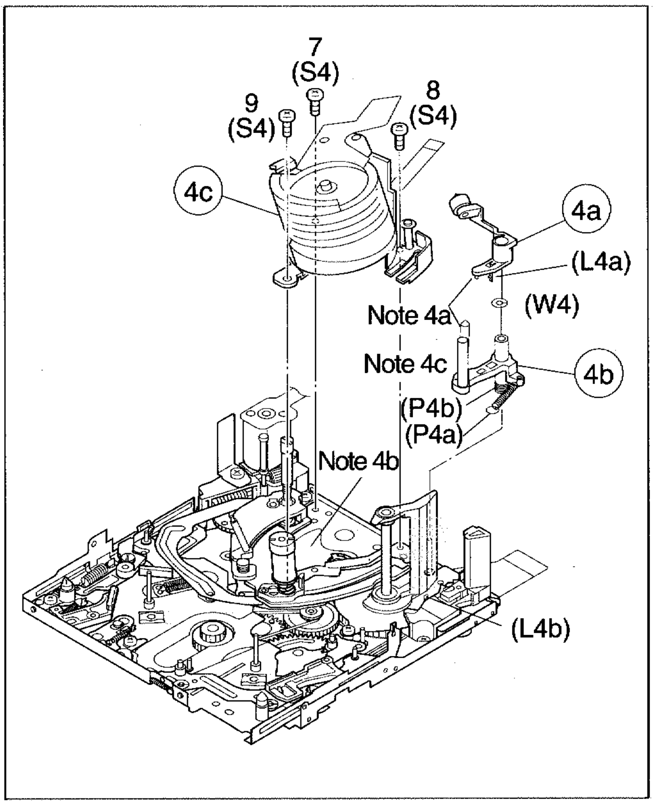
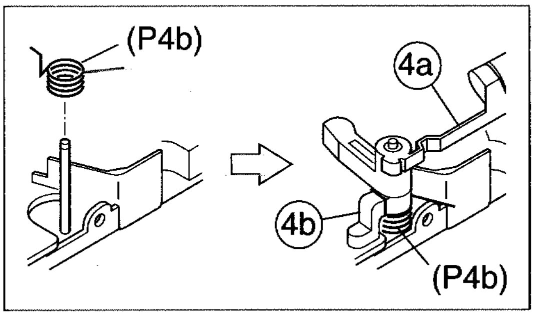


Fig. 2-2-15

Note 4a:
When removing the cleaner arm assembly, it is recommended to remove the slant pole arm assembly together with it except the case of a single unit replacement, because the hook (L4a) is hard to disengage.

Note 4b:
When the shield is applied, carefully remove the drum final assembly because the drum is stuck to the shield.

Note 4c:
How to set the coil spring (P4b).



5. (5a)Guide roller (SUPPLY) assembly/(5b) Rail assembly

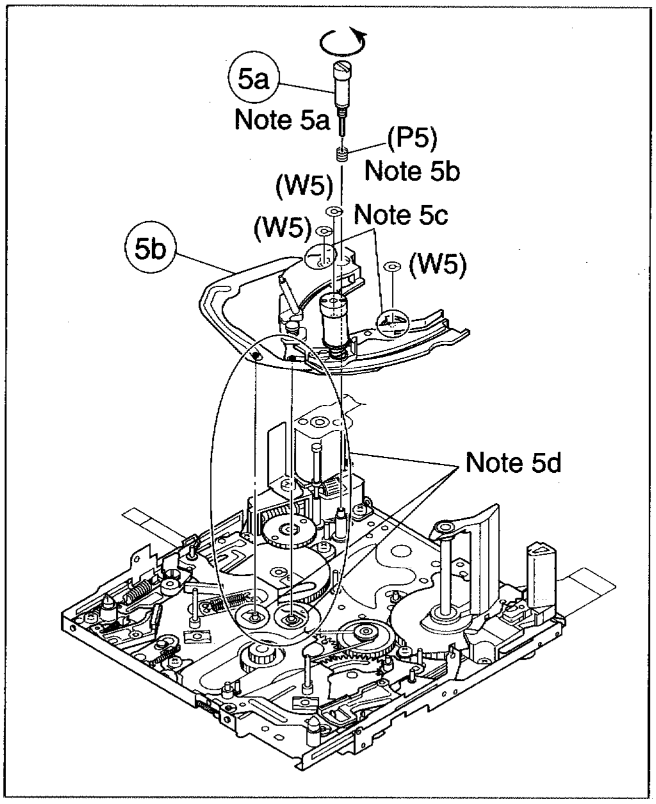

5a
Note 5a
(P5)
Note 5b
(W5)
(W5)
Note 5c
5b
(W5)
Note 5d

Fig. 2-2-16

Note 5a:
When removing the rail assembly, remove the guide roller (SUPPLY) assembly beforehand.

Note 5b:
Pay careful attention to the spring not to lose it.

Note 5c:
Pay careful attention to the engagement of the rail assembly's arm ends because they easily come off the engagement. Moreover, make sure that there is neither deformation nor damage observed in them.

Note 5d:
When removing the rail assembly, check to see if the collar is securely set in the arm groove.

6. Ⓑ Slide deck assembly/ Ⓒ Main deck assembly

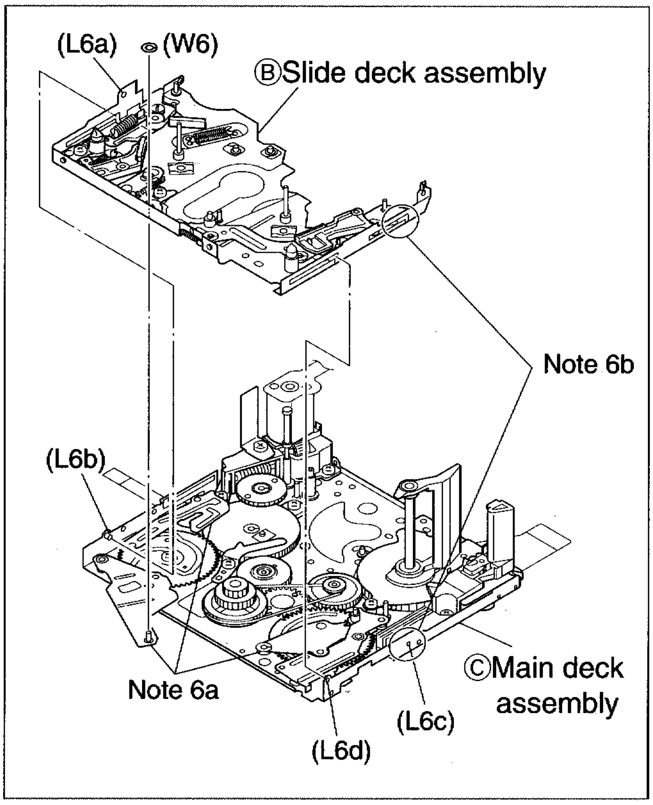
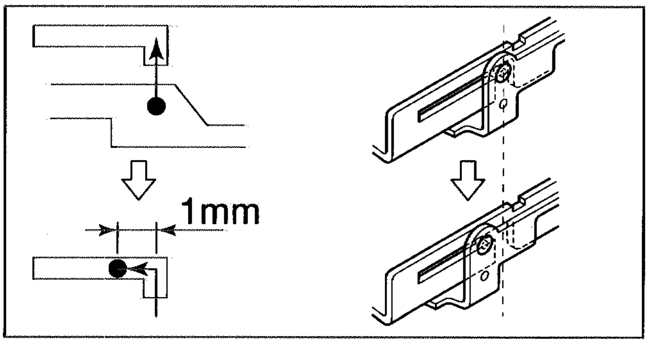

(L6a)
(W6)
ⒷSlide deck assembly
Note 6b
(L6b)
Note 6a
ⒸMain deck assembly
(L6c)
(L6d)

Fig. 2-2-17

Note 6a:
When removing the slide deck assembly, pay heed to the three components of the following because they are apt to come off after the slide deck assembly is removed.

(8a) Tension lever assembly/(8b) Slide lever assembly
(8c) Brake control lever assembly
For reassembling those components, refer to Fig. 2-2-19 on page 2-10.

Note 6b:
When reassembling the slide deck assembly to the main deck assembly, combine them with each other by the side grooves and then slide the slide deck assembly by 1 mm or so.



7. (7a) Loading brake assembly/(7b) Guide pin (S) (7c) Pad arm assembly/(7d) Slide guide plate assembly (7e) Collar/(7f) Collar/(7g) Sub brake assembly (7h) Control plate assembly

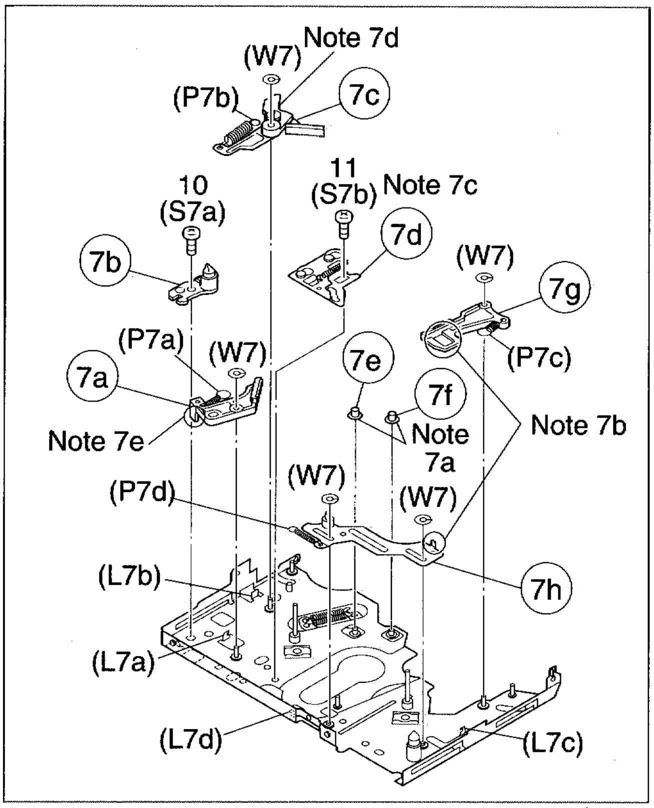


Fig. 2-2-18

8. (8a) Tension lever assembly/(8b) Slide lever assembly (8c) Brake control lever assembly

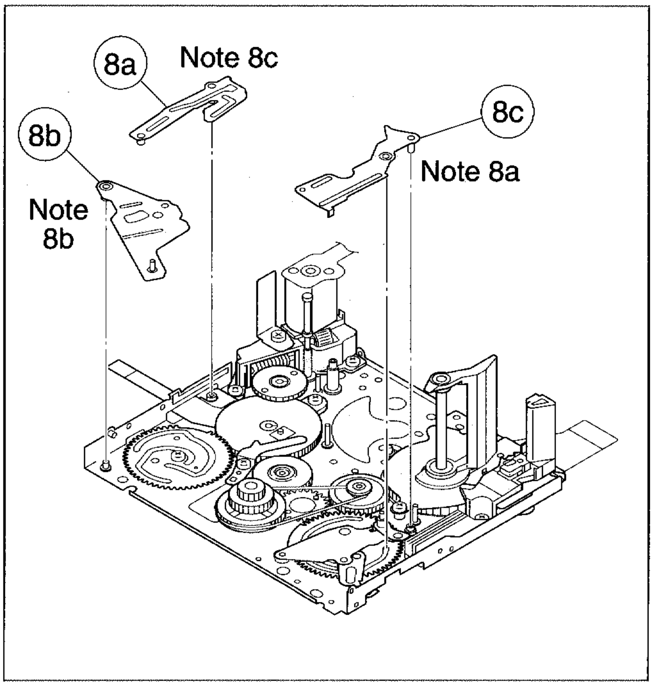
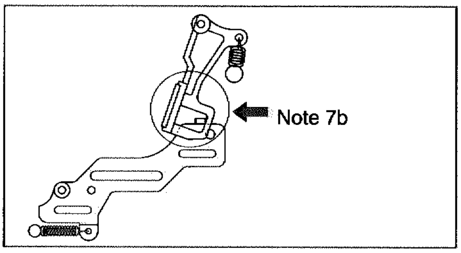


Fig. 2-2-19

Note 7a:
Don't remove these parts unreasonably. If they are removed for some reason, be very careful not to lose them.

Note 7b:
When reinstalling the sub brake assembly, set the control plate assembly so that its hook is set in the ⊡ part of the sub brake assembly.



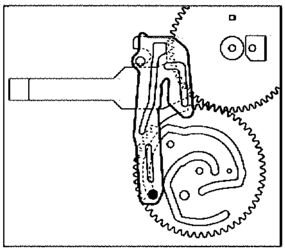
Note 7c:
Since the slide guide plate assembly controls the slide deck assembly so that it exactly slides the main deck assembly, it must exactly be assembled in the PLAY mode. Therefore, temporarily fix the slide guide plate assembly in this stage. For details of reassembling procedure, refer to "2.2.8 Assembling slide deck assembly and main deck assembly" on page 2-15.

Note 7d:
The pad arm assembly controls the tension level of the tension arm assembly. For adjustment of the tension arm assembly, refer to page 2-8.

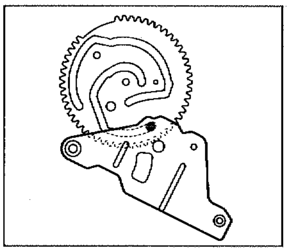
Note 7e:
When reinstalling the load brake assembly, slightly lift the slide deck assembly upwards because the lower part of the load brake assembly sticks out of the slide deck assembly.

Note 8a, 8b, 8c:
For refitting the respective parts, refer to the following figures

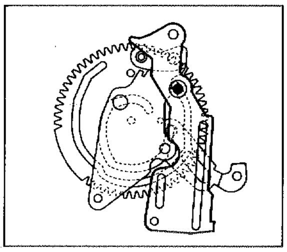
(8a) Tension lever assembly



(8b) Slide lever assembly



(8c) Brake control lever assembly



9. (9a) Loading guide/(9b) Timing belt (9c) Center gear assembly/(9d) Motor bracket assembly (9e) Worm wheel/(9f) Gear holder

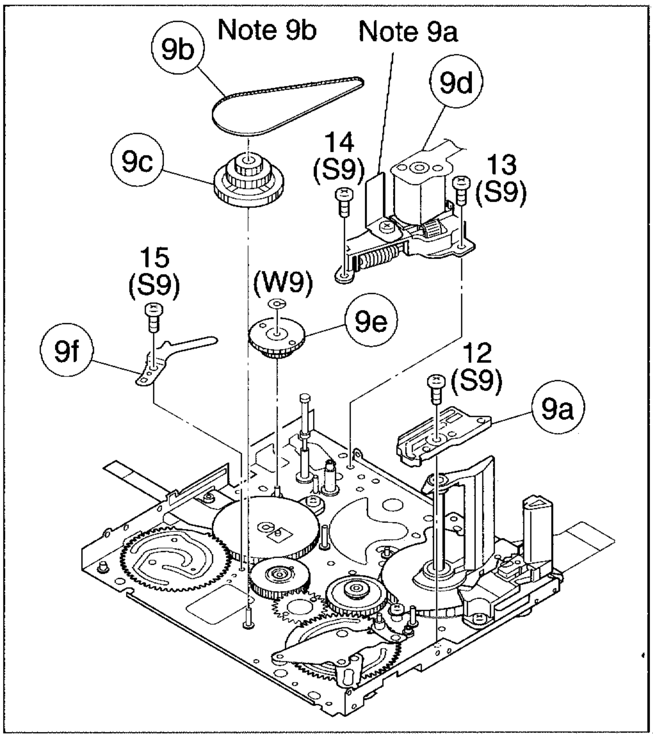

9b
Note 9b
Note 9a
9d
14
(S9)
13
(S9)
9c
15
(S9)
(W9)
9e
9f
12
(S9)
9a

Fig. 2-2-20

Note 9a:
Carefully handle the DEW sensor. (Don't touch the sensor surface in particular.)

Note 9b:
When engaging the timing belt, make sure that it securely engages with the gears of both the center gear assembly and reel drive pulley assembly.

10. (10a) Main cam gear/(10b) Brake control plate (10c) Rotary encoder/(10d) Connect gear (10e) Reel drive pulley assembly

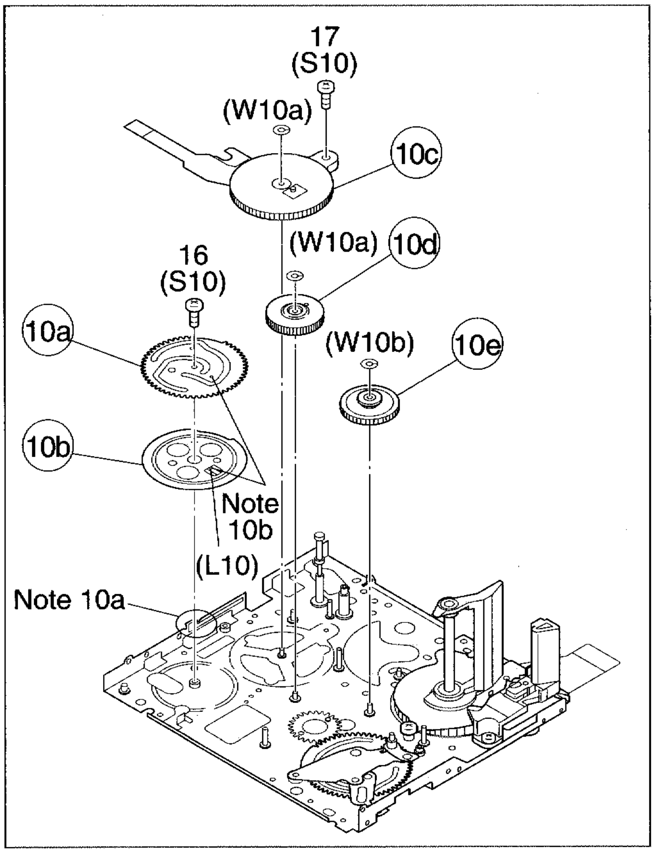
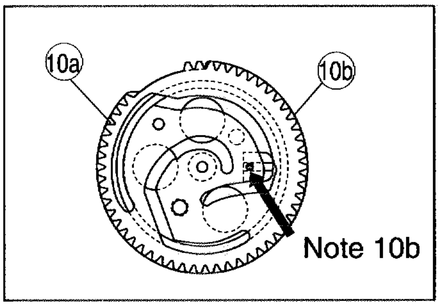

17
(S10)
(W10a)
10c
(W10a)
10d
16
(S10)
10a
(W10b)
10e
10b
Note
10b
(L10)
Note 10a

Fig. 2-2-21

Note 10a:
When removing/refitting parts, pay careful attention to the flexible board and so on not to damage them.

Note 10b:
When reinstalling the main cam gear and the brake control plate, first fit them together so that the protrusion on the brake control plate is set in the slot on the main cam gear as shown below, next install the two together to the main deck assembly.


10a
10b
Note 10b

11. (11a) Catcher (T) assembly/(11b) Capstan motor (11c) Charge arm assembly/(11d) Sub cam gear (11e) PWB holder

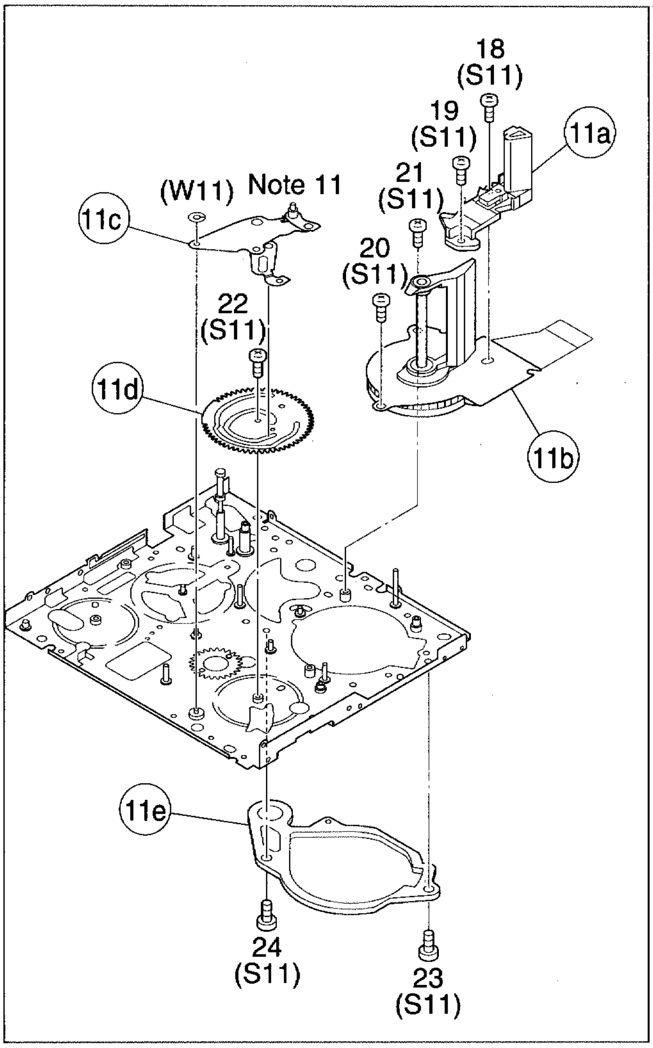
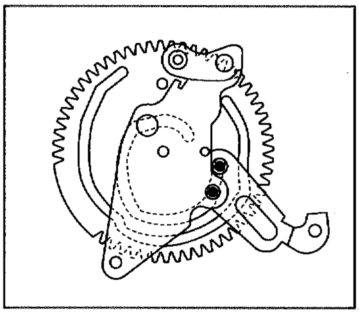

18
(S11)
19
(S11)
11a
21
(S11)
(W11)
Note 11
11c
20
(S11)
22
(S11)
11d
11b
11e
24
(S11)
23
(S11)

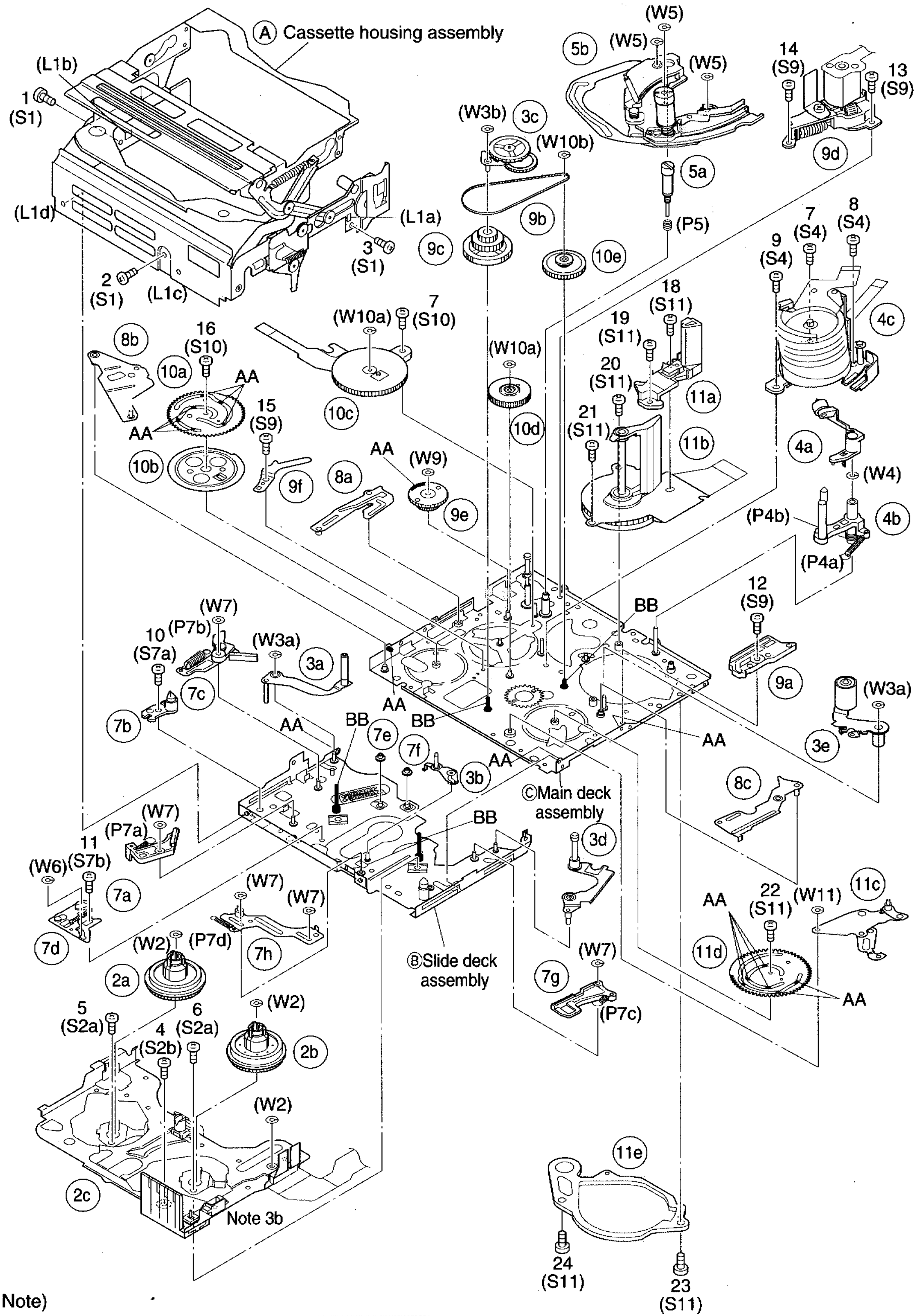
Fig. 2-2-22

Note 11:

The following figure shows how to put the charge arm assembly and sub cam gear assembly together.



2.2.6 List of procedures for disassembly

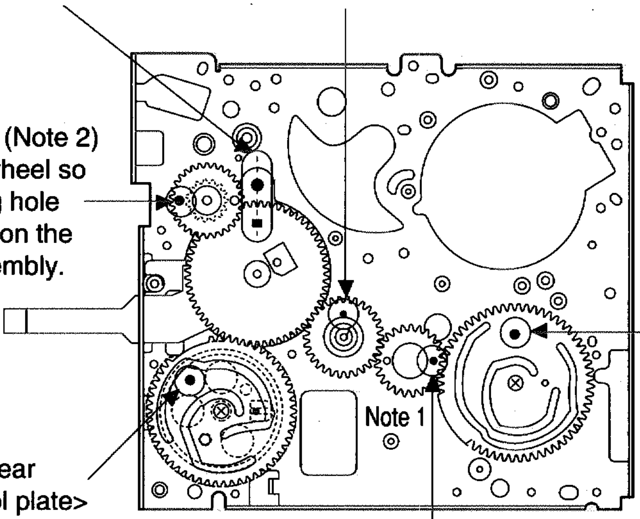

Ⓐ Cassette housing assembly
(L1b)
1
(S1)
(L1d)
(L1a)
3
(S1)
2
(S1)
(L1c)
(W5)
5b
(W5)
(W5)
14
(S9)
13
(S9)
9d
(W3b)
3c
(W10b)
5a
(P5)
9b
9c
10e
7
(S4)
8
(S4)
9
(S4)
4c
18
(S11)
19
(S11)
20
(S11)
11a
21
(S11)
11b
7
(W10a)
(S10)
(W10a)
10c
10d
8b
16
(S10)
10a
AA
15
(S9)
10b
9f
8a
AA
(W9)
9e
4a
(W4)
(P4b)
4b
(P4a)
12
(S9)
BB
9a
(W3a)
3e
(W7)
10
(P7b)
(S7a)
(W3a)
3a
7c
7b
AA
BB
BB
7e
7f
3b
AA
ⒸMain deck assembly
8c
AA
(W7)
(P7a)
11
(S7b)
(W6)
7a
BB
3d
7d
(W7)
(W7)
(W2)
(P7d)
7h
2a
ⒷSlide deck assembly
(W7)
7g
(P7c)
22
(S11)
(W11)
11c
11d
5
(S2a)
6
(S2a)
4
(S2b)
(W2)
2b
(W2)
2c
Note 3b
11e
24
(S11)
23
(S11)

Note)

Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	YTU94027	BB

Fig. 2-2-23

2.2.7 Checkup and adjustment of mechanism phase



<Rotary encoder>
Set the "■" of the rotary part at the tapped hole as shown in the figure.

<Connect gear> (Note 2)
Set the connect gear so that its locating hole meets the hole on the main deck assembly.

<Worm wheel> (Note 2)
Set the worm wheel so that its locating hole meets the hole on the main deck assembly.

<Sub cam gear>
Set the sub cam gear so that its locating hole meets the hole on the main deck assembly. This state represents that the mechanism is in the EJECT mode, which is the "mechanism assembly mode".

<Main cam gear /Brake control plate>
After fitting the main cam\ gear and brake control plat together,set them together so that their locating holes meet the hole on the main \ deck assembly.

<Connect gear 2> (Note 2)
Set the connect gear 2 so that its locating hole meets the hole on the main deck assembly.

Note 1:
Since the connect gear 2 is tightly fixed to the main deck by caulking, adjust its phase with the connect gear and sub cam gear.

Note 2:
The part that needs phase adjustment by the hole on the main deck assembly must exactly be set as the specified phase. There is a fear that some part is installed in a wrong phase because assembling of the mechanism is automated. If so, set every part in the correct phase whenever the mechanism is reassembled.

Fig. 2-2-24

2.2.8 Assembling slide deck assembly and main deck assembly

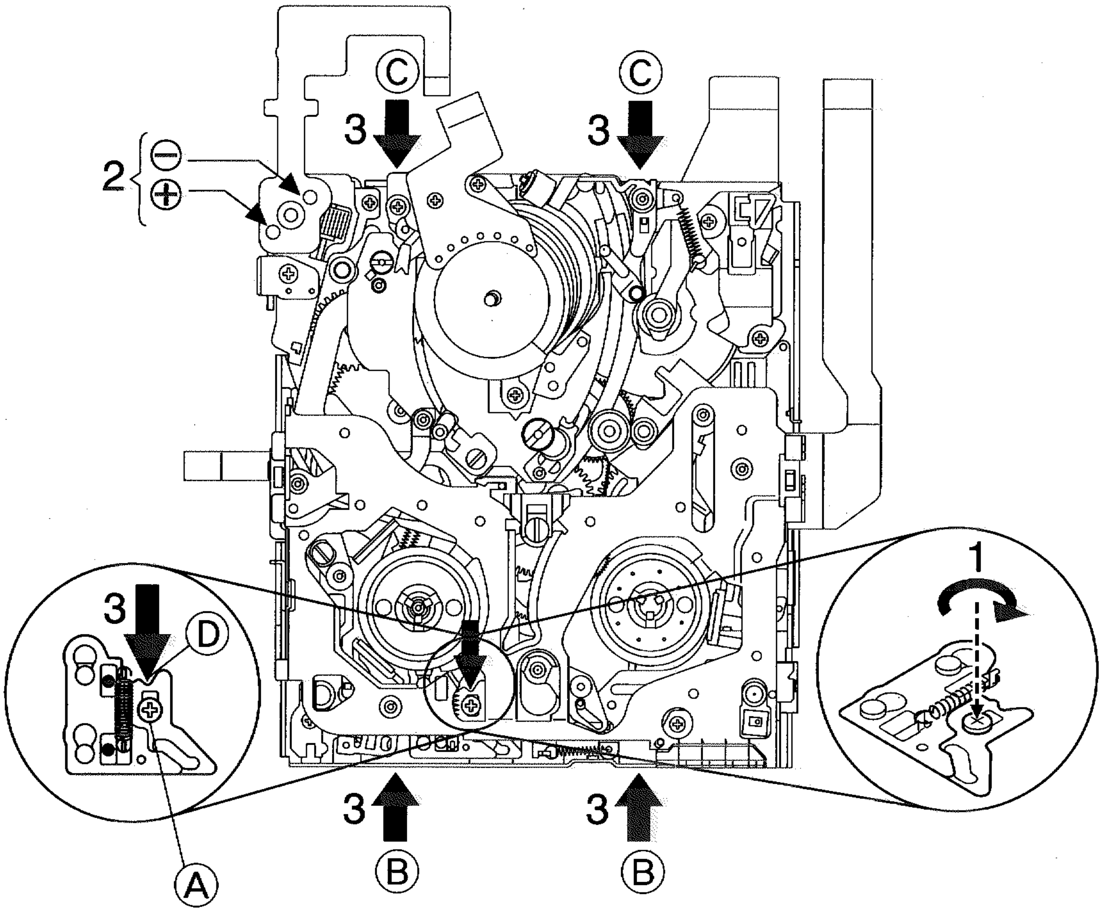


Fig. 2-2-25

Assembling procedure

1. Loosen the screw Ⓐ.
2. Set the mechanism in the PLAY mode. (Refer to page 2-2.)
3. Press the end face B of the slide deck assembly (reel disk side) and the end face Ⓒ of the main deck assembly (drum assembly side) with uniform force so that the two assemblies are tightly pressed to each other. Furthermore, press the part Ⓓ and tighten the screw Ⓐ.

Note : *Tightening torque for screw Ⓐ: 0.029 N·m (0.3 kgf·cm)*

2.2.9 Locating tension pole

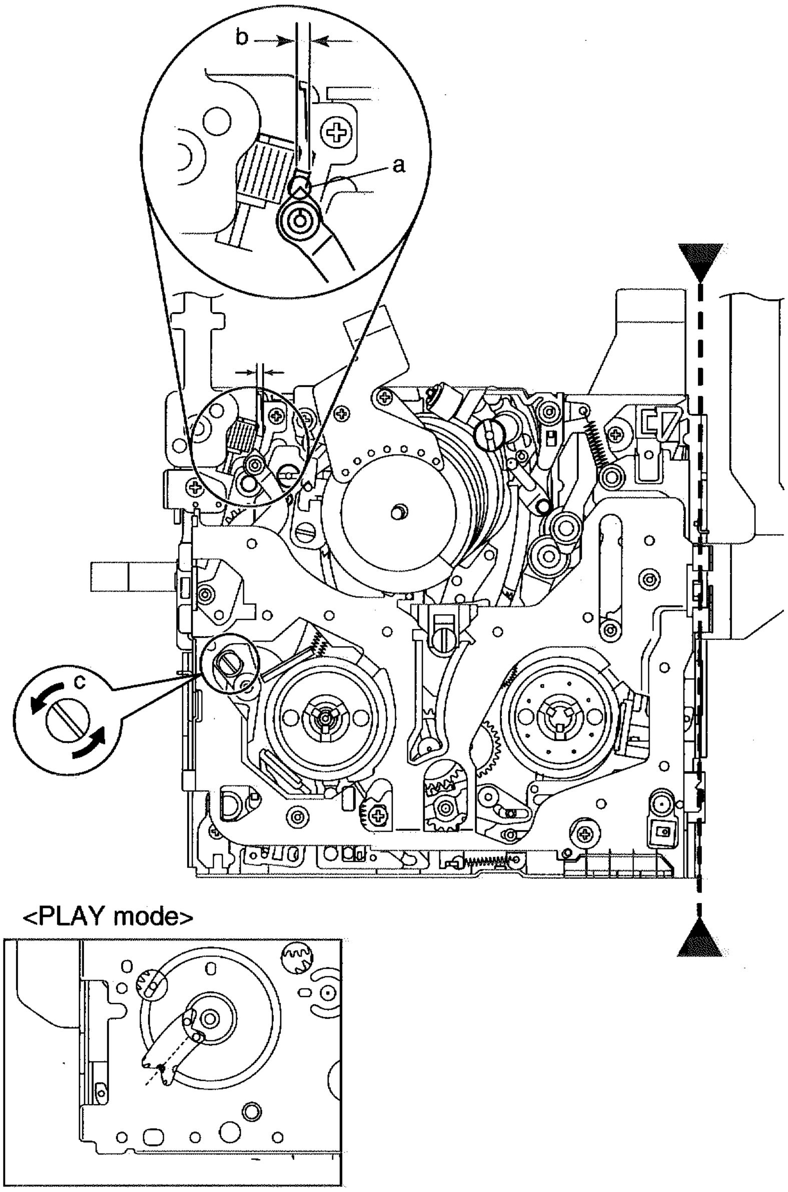


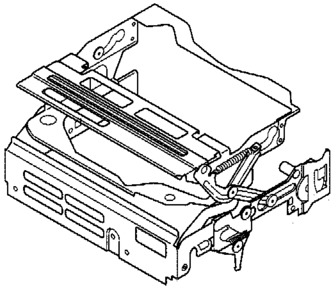
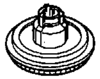
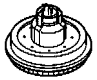
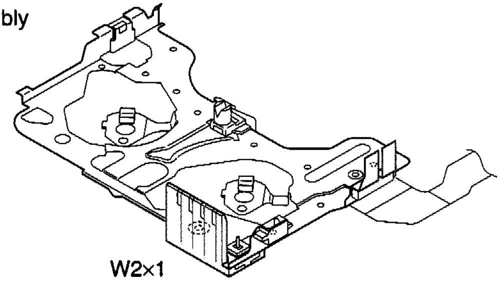
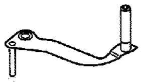
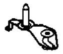
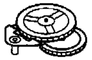
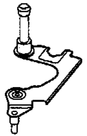
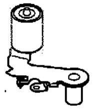
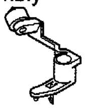
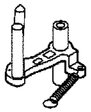
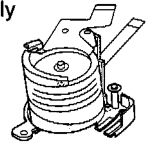
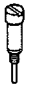
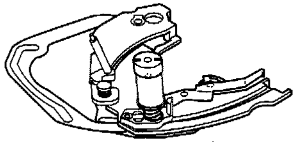
Fig. 2-2-26

Locating procedure

1. Enter the mechanism assembly into the PLAY mode. (Refer to page 2-2.)
2. When the " ▶-----◀ " part is positioned down, make sure that the part "a" of the tension arm assembly is located within the range of "b".
3. If the part "a" is out of the range, turn the pin "c" to adjust the position.

2.3 SERVICE NOTE

Use the following chart to manage mechanism parts that are removed for disassembling the mechanism.

1	Ⓐ Cassette housing assembly  S1×3				
2	②a Reel disk (SUP) assembly  W2×1 ②b Reel disk (TU) assembly  W2×1	②c Reel cover assembly  S2a×2 S2b×1 W2×1			
3	③a Tension arm assembly  W3a×1	③b Release guide assembly 	③c Idler arm assembly  W3b×1	③d Guide arm assembly 	③e Pinch roller arm assembly  W3a×1
4	④a Cleaner arm assembly 	④b Slant pole arm assembly  W4×1 P4a×1 P4b×1	④c Drum assembly  S4×3		
5	⑤a Guide roller (S) assembly  P5×1	⑤b Rail assembly  W5×3			

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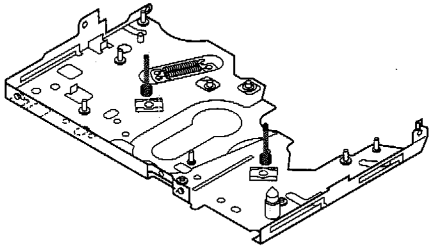
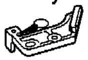
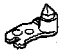
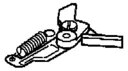
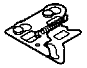

W6×1</td><td rowspan="2">7</td><td>(7a) Loading brake assembly

W7×1 P7a×1</td><td>(7b) Guide pin (SUPPLY)

S7a×1</td><td>(7c) Pad arm assembly

W7×1 P7b×1</td><td>(7d) Slide guide plate assembly

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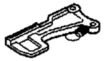
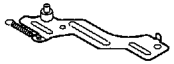
<tr><td>(7e) Collar
 </td><td>(7f) Collar
 </td><td>(7g) Sub brake assembly

W7×1 P7c×1</td><td>(7h) Control plate assembly

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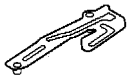
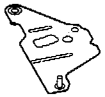
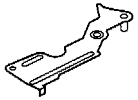
</td><td colspan="2">(8b) Slide lever assembly
</td><td colspan="2">(8c) Brake control lever assembly
</td></tr>
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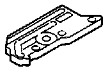
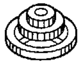
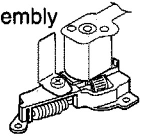
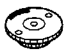

S9×1</td><td>(9b) Timing belt
 </td><td>(9c) Center gear assembly
</td><td>(9d) Motor bracket assembly

S9×2</td><td>(9e) Worm wheel

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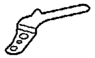
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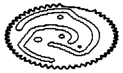
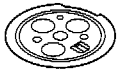
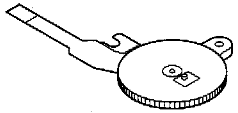
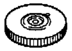
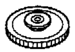
<tr><td>10</td><td>(10a) Main cam gear

S10×1</td><td>(10b) Brake control plate
</td><td colspan="2">(10c) Rotary encoder

S10×1 W10a×1</td><td>(10d) Connect gear

W10a×1</td><td>(10e) Reel drive pulley assembly

W10b×1</td></tr>
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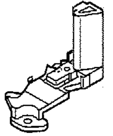
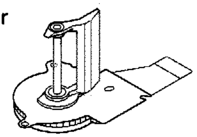
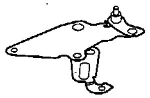
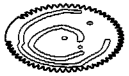
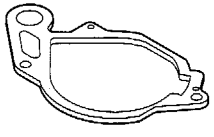

S11×2</td><td>(11b) Capstan motor

S11×2</td><td>(11c) Charge arm assembly

W11×1</td><td>(11d) Sub cam gear

S11×1</td><td colspan="2">(11e) PWB holder

S11×2</td></tr>
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Table 2-3-1

2.4 JIG CONNECTOR CABLE (YTU93082E) CONNECTOR

Remove one screw (1) first and the cover (JIG) next.

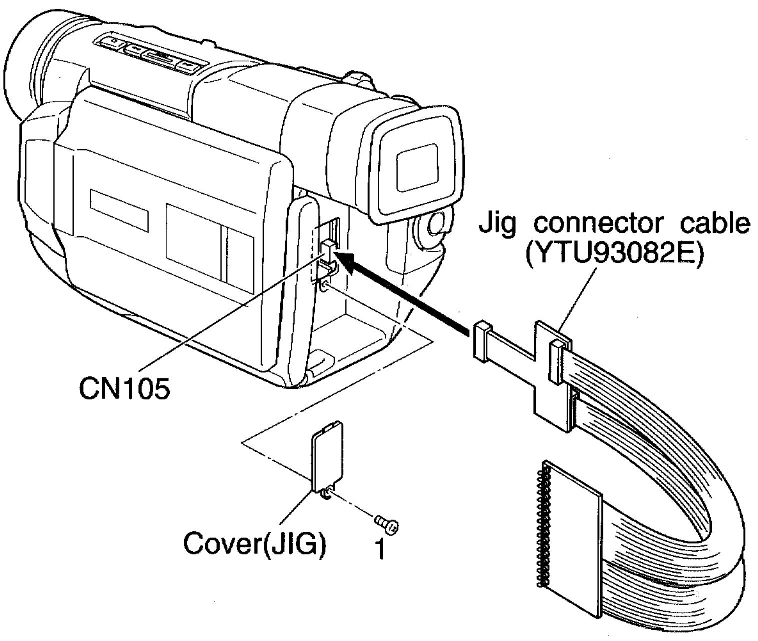

Jig connector cable
(YTU93082E)
CN105
Cover(JIG)
1

Fig. 2-4-1 Jig connector cable connection

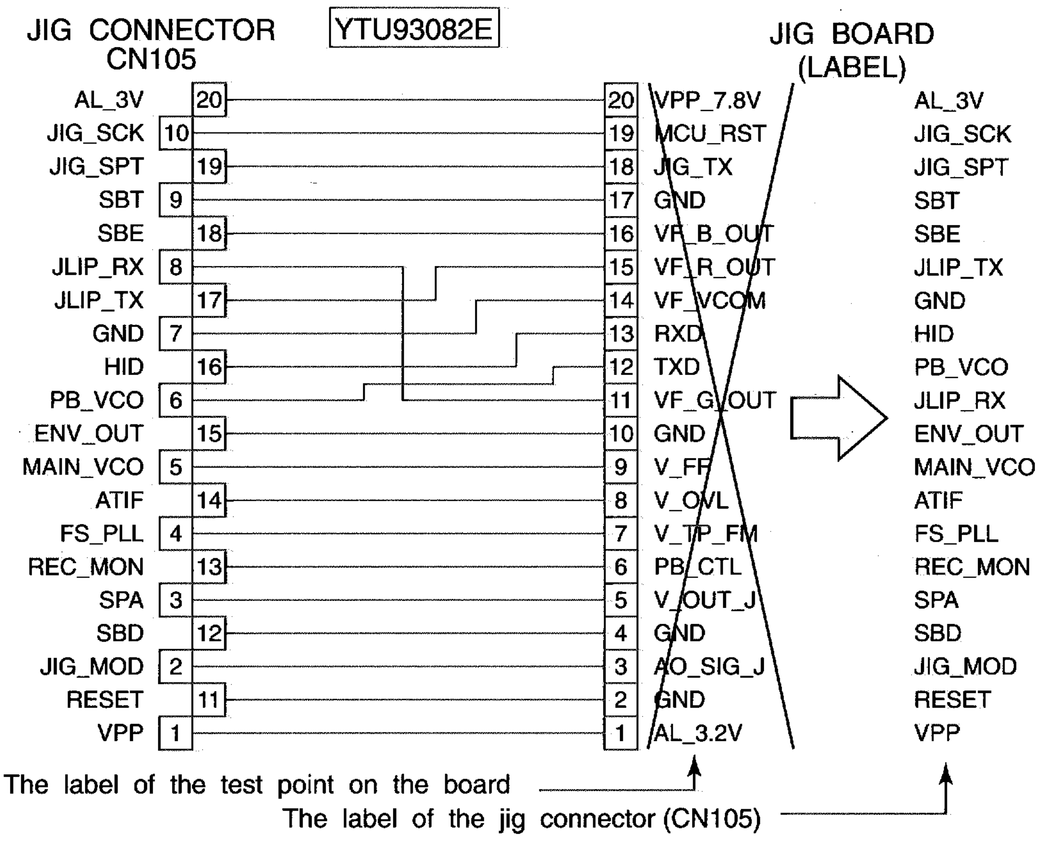

JIG CONNECTOR
CN105
YTU93082E
JIG BOARD
(LABEL)
AL_3V 20 — 20 VPP_7.8V — AL_3V
JIG_SCK 10 — 19 MCU_RST — JIG_SCK
JIG_SPT 19 — 18 JIG_TX — JIG_SPT
SBT 9 — 17 GND — SBT
SBE 18 — 16 VF_B_OUT — SBE
JLIP_RX 8 — 15 VF_R_OUT — JLIP_TX
JLIP_TX 17 — 14 VF_VCOM — GND
GND 7 — 13 RXD — HID
HID 16 — 12 TXD — PB_VCO
PB_VCO 6 — 11 VF_G_OUT — JLIP_RX
ENV_OUT 15 — 10 GND — ENV_OUT
MAIN_VCO 5 — 9 V_FF — MAIN_VCO
ATIF 14 — 8 V_OVL — ATIF
FS_PLL 4 — 7 V_TP_FM — FS_PLL
REC_MON 13 — 6 PB_CTL — REC_MON
SPA 3 — 5 V_OUT_J — SPA
SBD 12 — 4 GND — SBD
JIG_MOD 2 — 3 AO_SIG_J — JIG_MOD
RESET 11 — 2 GND — RESET
VPP 1 — 1 AL_3.2V — VPP
The label of the test point on the board
The label of the jig connector (CN105)

Fig. 2-4-2 Jig connector cable schematic diagram

SECTION 3
ELECTRICAL ADJUSTMENT

3.1 PREPARATION

1. Precaution

Both the camera and deck sections of this model needs a personal computer for adjustment except simple adjustment with potentiometers. If some of the following parts is replaced for repair or other reason, the repaired set must be adjusted with a personal computer.

- OP block
- E^2PROM (IC1003 of MAIN board)
- MONITOR
- E^2P ROM (IC7603 of MONITOR board)

In the event of malfunction with electrical circuits, troubleshooting with the aid of proper test instruments most be done first, and then commence necessary repair, replacement and adjustment, etc.

1. In case of wiring to chip test points for measurement, use IC clips, etc. to avoid any stress.
2. Since connectors are fragile, carefully handle them in disconnecting and connecting.
3. Shortcircuit between operation un it and DECK chassis.

2. Required test equipment

1. Color TV monitor.
2. AC power adapter/charger
3. Oscilloscope (dual-trace type, observable 100 MHz or higher frequency)

Note: ***It is recommended to use one observable 300 MHz or higher frequency.***

4. Digital voltmeter
5. Frequency counter (with threshold level adjuster)
6. Personal computer

3. Required adjustment tools

For detsails of special jigs necessary for adjustment, refer to page 1-2 and 1-3 of the Section 1.

3.2 E. VF SECTION ADJUSTMENT (B/W VF ONLY)

Referring to "SEC. 1 DISASSEMBLY" and connect the E.VF FPC to CN7602 of the MONITOR board.

3.3 SETUP

1. Setup for electrical adjustment with personal computer

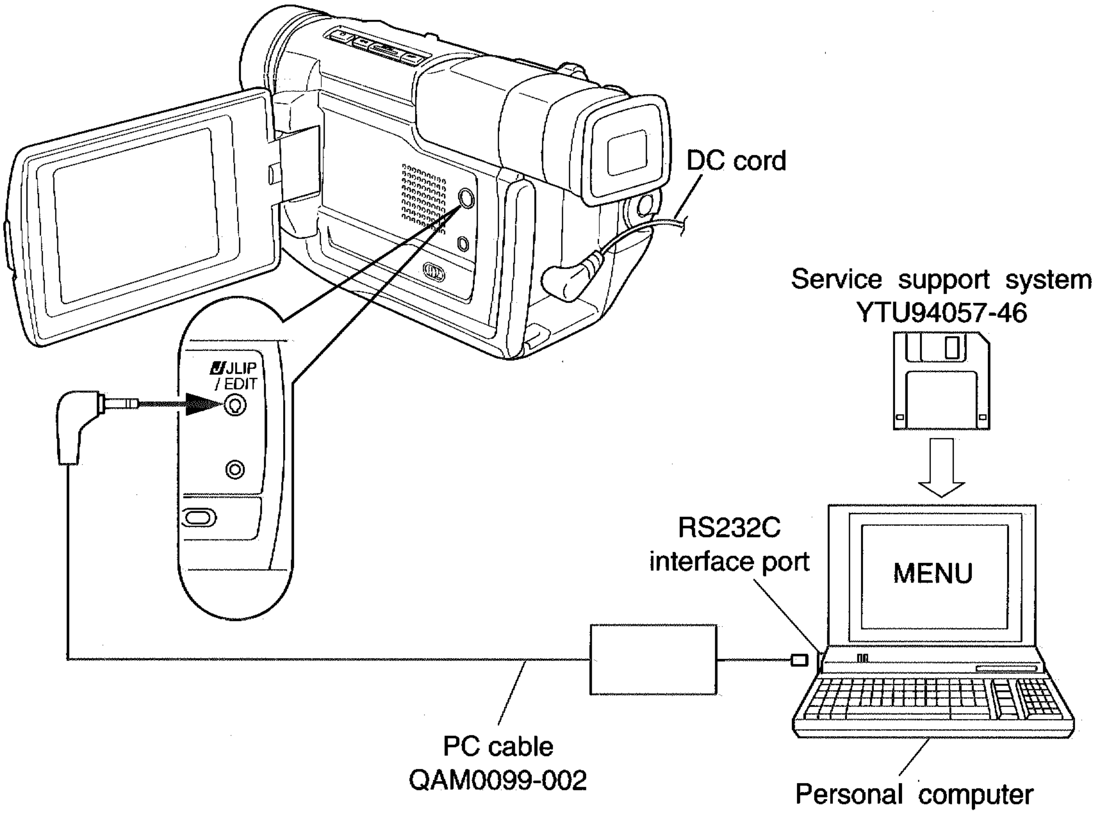


Fig. 3-3-1 Connection for Service support system (I)

2. Setup with patch cords and jig connector cables

NOTE:

Fig. 3-3-2 shows an example of expansion setup that facilitates inspection of major boards because main components are connected by means of patch cords and jig cables. For proceeding to electrical adjustment in such the setup, disassemble the set at a certain level required for the current adjustment objectives referring to the section 1 "DISASSEMBLY" and properly set up the expanded set and test instruments.

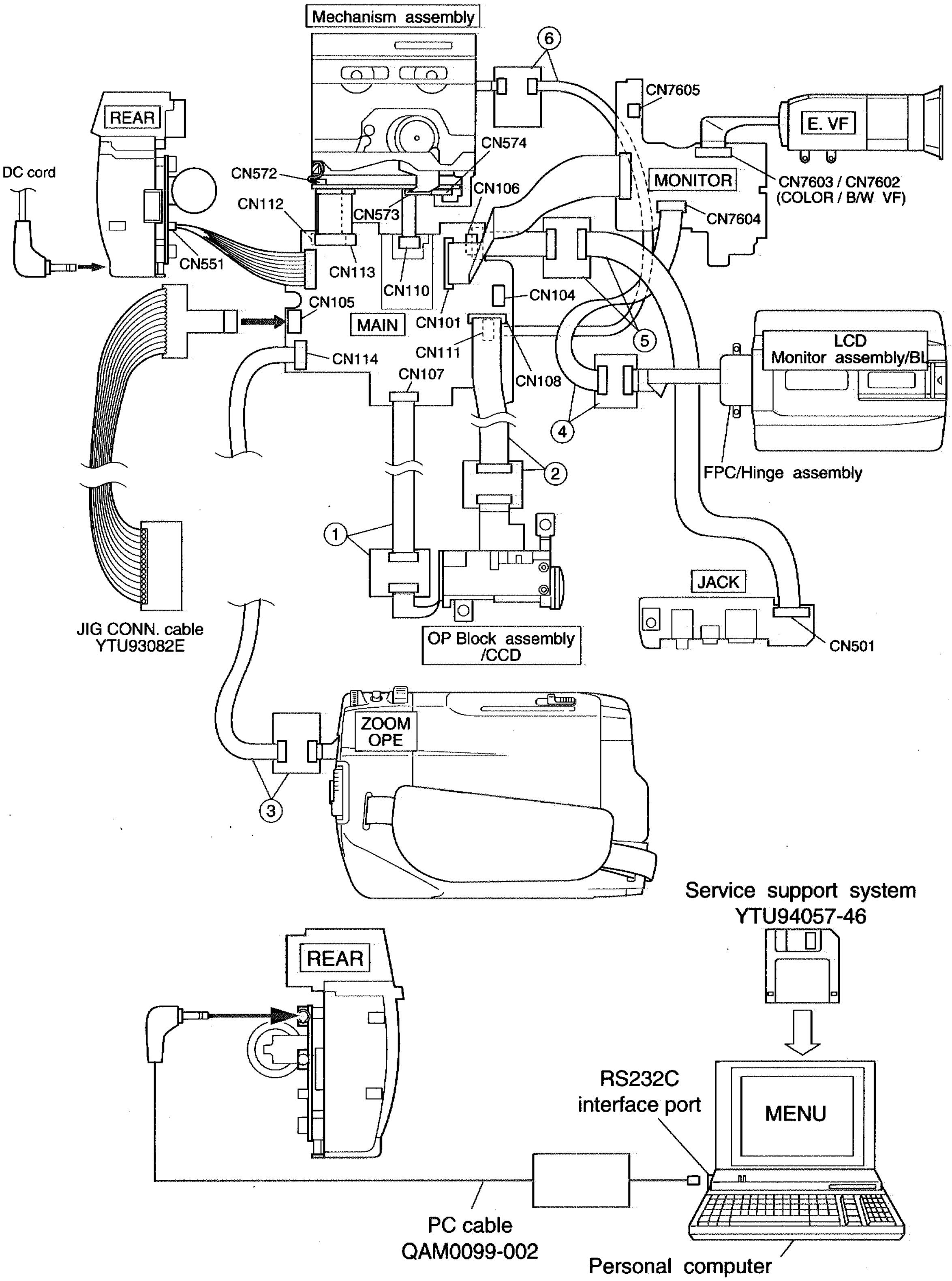
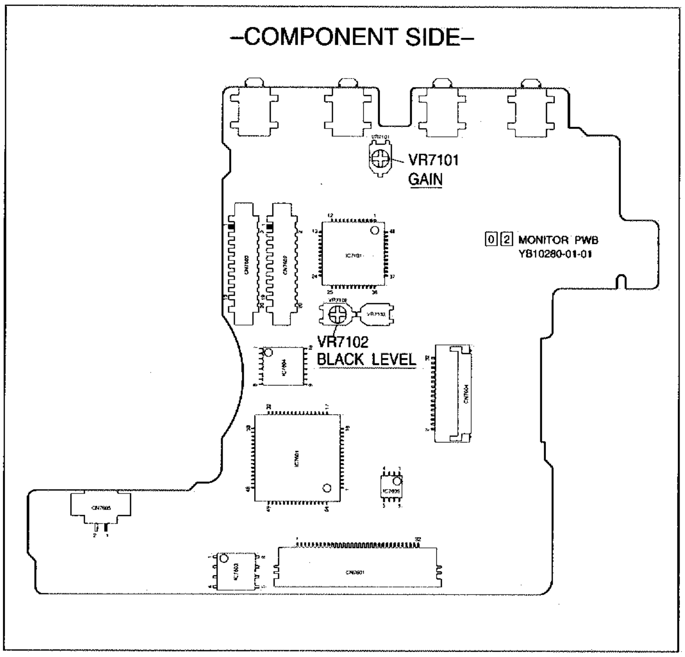

Mechanism assembly
⑥
CN7605
E. VF
REAR
CN574
DC cord
CN572
CN106
MONITOR
CN7603 / CN7602
(COLOR / B/W VF)
CN112
CN573
CN7604
CN551
CN113
CN110
CN104
CN105
MAIN
CN101
⑤
LCD
Monitor assembly/BL
CN114
CN111
CN107
CN108
④
②
FPC/Hinge assembly
①
JACK
JIG CONN. cable
YTU93082E
OP Block assembly
/CCD
CN501
ZOOM
OPE
③
Service support system
YTU94057-46
REAR
RS232C
interface port
MENU
PC cable
QAM0099-002
Personal computer

Fig. 3-3-2 Setup for electrical adjustment with personal computer (II)

3.4 ELECTRONIC VIEWFINDER (B/W VF) ADJUSTMENT

Notes: *Unless otherwise specified, all measurement points and adjustment parts are located on MONITOR board.*



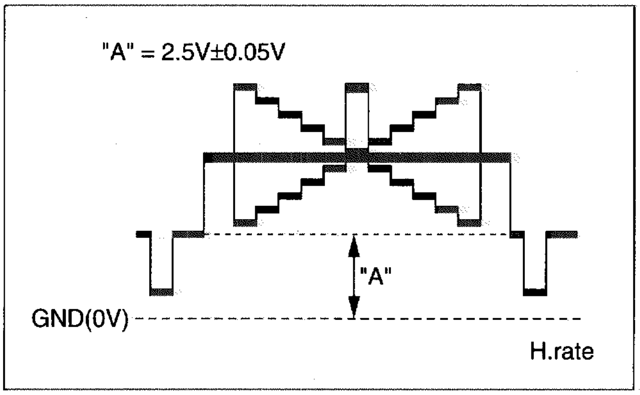
–COMPONENT SIDE–
VR7101
GAIN
VR7102
BLACK LEVEL
02 MONITOR PWB
YB10280-01-01

Fig. 3-4-1 MONITOR board

3.4.1 Black level

Subject	• Camera picture • Gray scale
Mode	• EE
Equipment	• Oscilloscope
Measurement point	• IC7101 pin 27 (VIDLO)
Adjustment part	• VR7102 (Black level)
Specification	• "A"=2.5 V ± 0.05 V

1) Observe waveform at pin 27 of the IC7101.
2) Adjust VR7102 so that DC level of "A" (between the pedestal level and GND, see Fig. 3-4-2) of a waveform becomes 2.5 V ± 0.05 V.



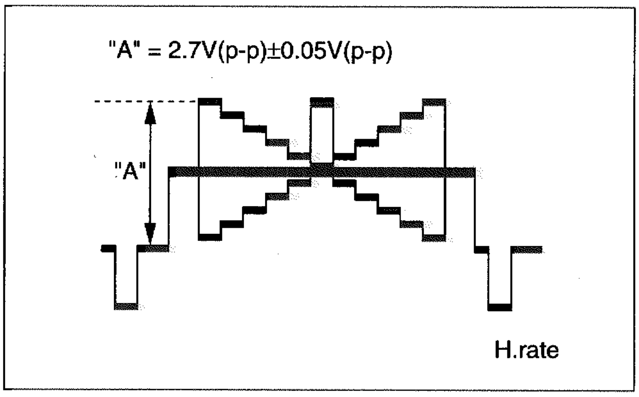
"A" = 2.5V±0.05V
"A"
GND(0V)
H.rate

Fig. 3-4-2 Black level

3.4.2 Gain

Subject	• Camera picture • Gray scale
Mode	• EE
Equipment	• Oscilloscope
Measurement point	• IC7101 pin 27 (VIDLO)
Adjustment part	• VR7101 (Gain)
Specification	• "A"=2.7V(p-p) ± 0.05 V(p-p)

1) Observe waveform at pin 27 of the IC7101.
2) Adjust VR7101 so that level of "A" (see Fig. 3-4-3) of a waveform becomes 2.7 V(P-P) ± 0.05 V(p-p).



"A" = 2.7V(p-p)±0.05V(p-p)
"A"
H.rate

Fig. 3-4-3 Gain

SECTION 4
CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

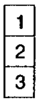
1) All resistance values are in ohm. 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values are in μH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

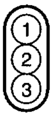
AUX : Active at high.

$\overline{\text{AUX}}$ or AUX(L) : Active at low.

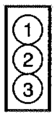
3. Interpreting Connector indications



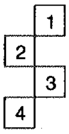
Removable connector



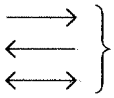
Wire soldered directly on board



Non-removable Board connector



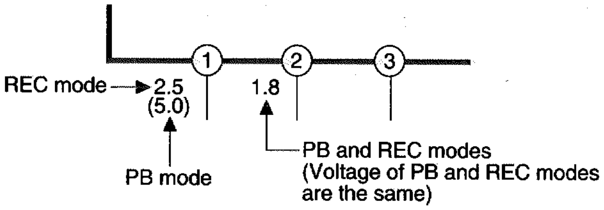
Board to Board



Connected pattern on board
The arrows indicate signal path

4. Voltage measurement

1) Regulator (DC/DC CONV) circuits
   REC : Colour bar signal.
   PB : Alignment tape (Colour bar).
   — : Unmeasurable or unnecessary to measure.
4) Indication on schematic diagram
   Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Signal path Symbols

The arrows indicate the signal path as follows.

NOTE : The arrow is DVC unique object.

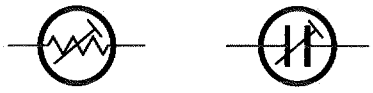
⇨ Playback signal path
▭▶ Playback and recording signal path
➡ Recording signal path (including E-E signal path)
⇨▷ Capstan servo path
➡▶ Drum servo path

(Example)

⇨ R-Y Playback R-Y signal path
➡ Y Recording Y signal path

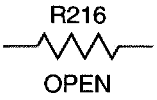
6. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



7. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.



CIRCUIT BOARD NOTES

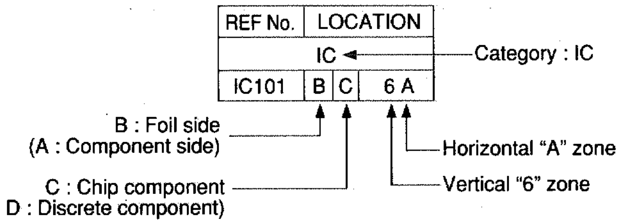
1. Foil and Component sides

1) Foil side (B side) :
Parts on the foil side seen from foil face (pattern face) are indicated.

2) Component side (A side) :
Parts on the component side seen from component face (parts face) indicated.

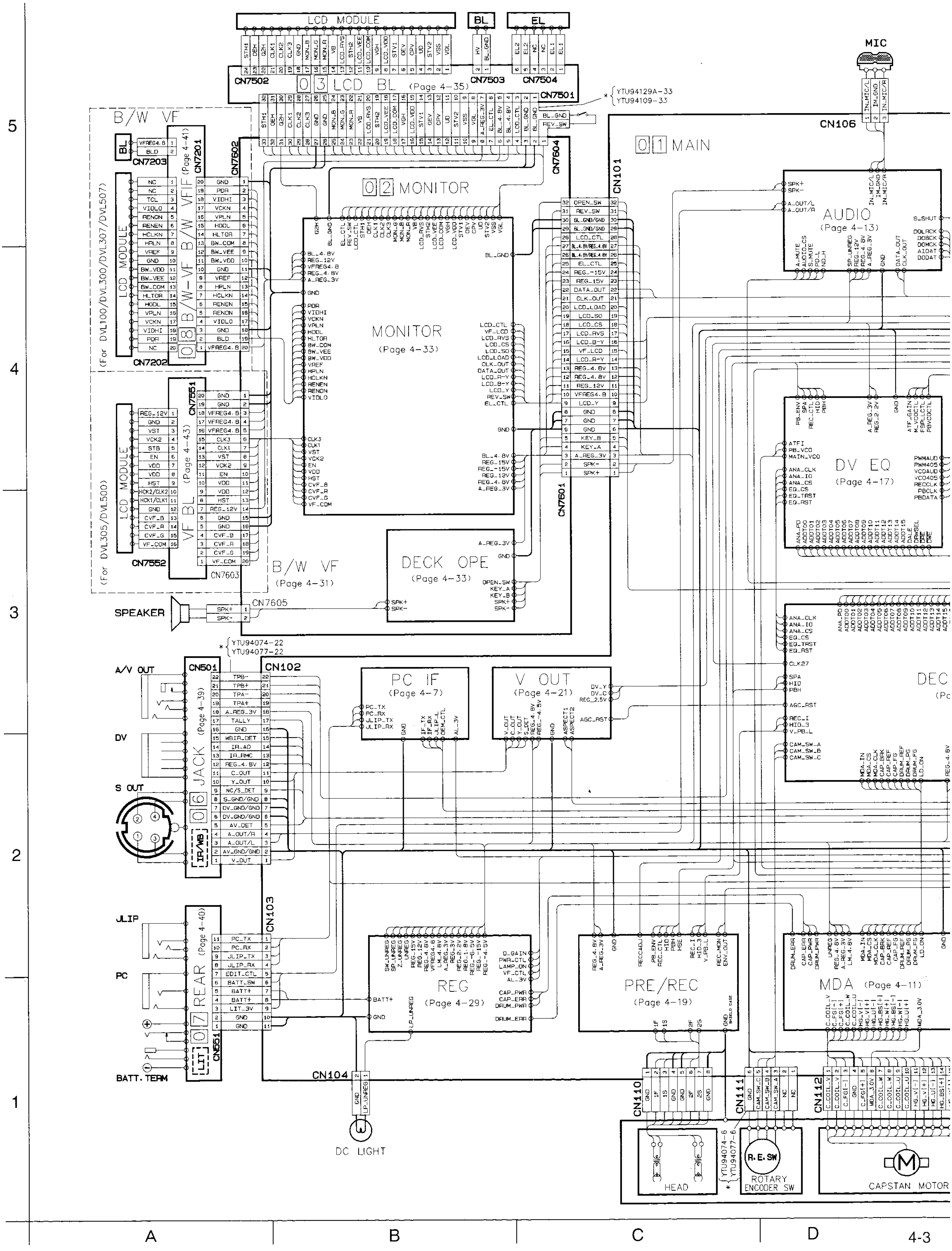
2. Parts location guides

Parts location are indicated by guide scale on the circuit board.

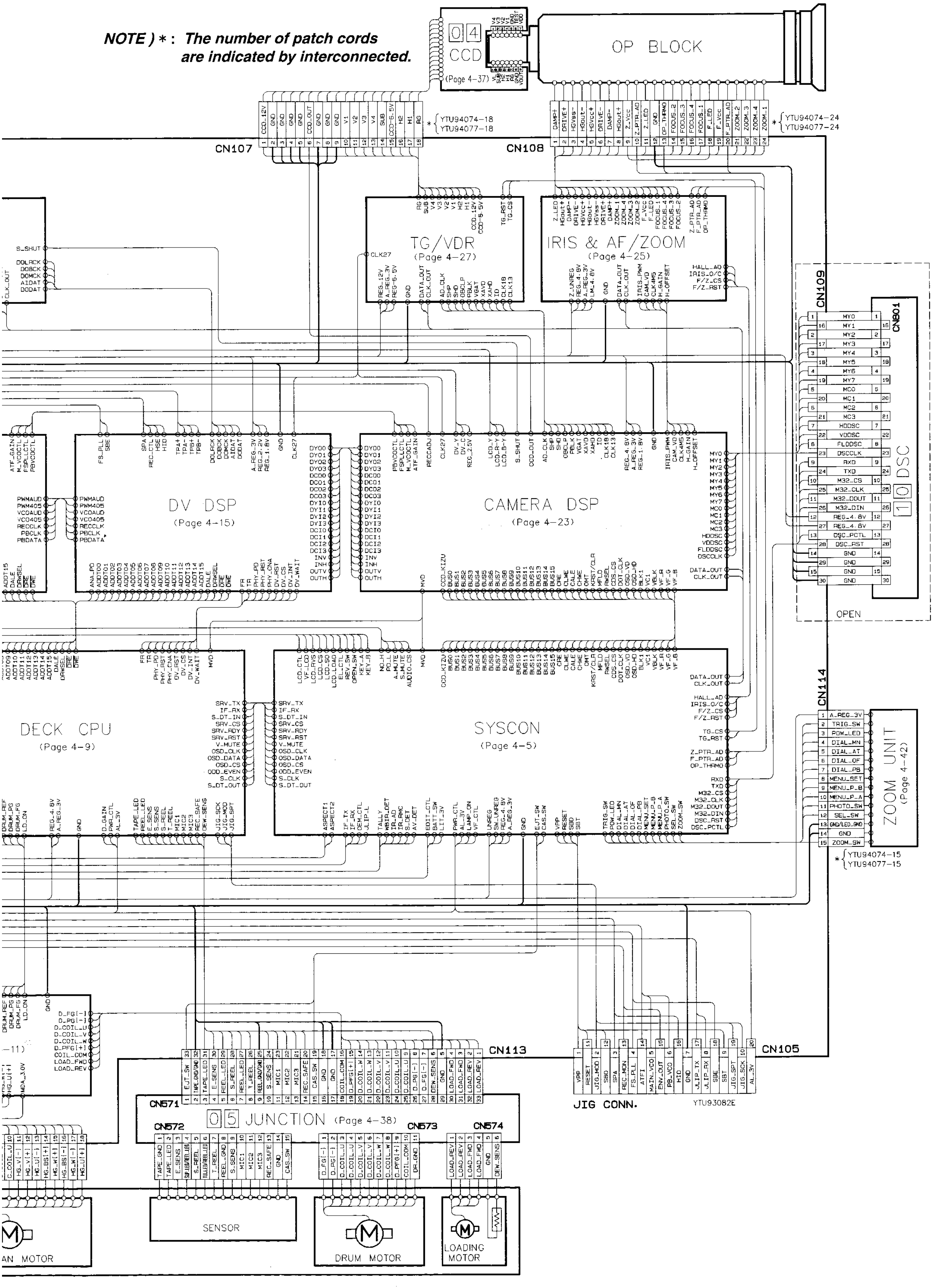

REF No.
LOCATION
IC
Category : IC
IC101
B
C
6 A
B : Foil side
(A : Component side)
C : Chip component
D : Discrete component)
Horizontal "A" zone
Vertical "6" zone

Note: For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

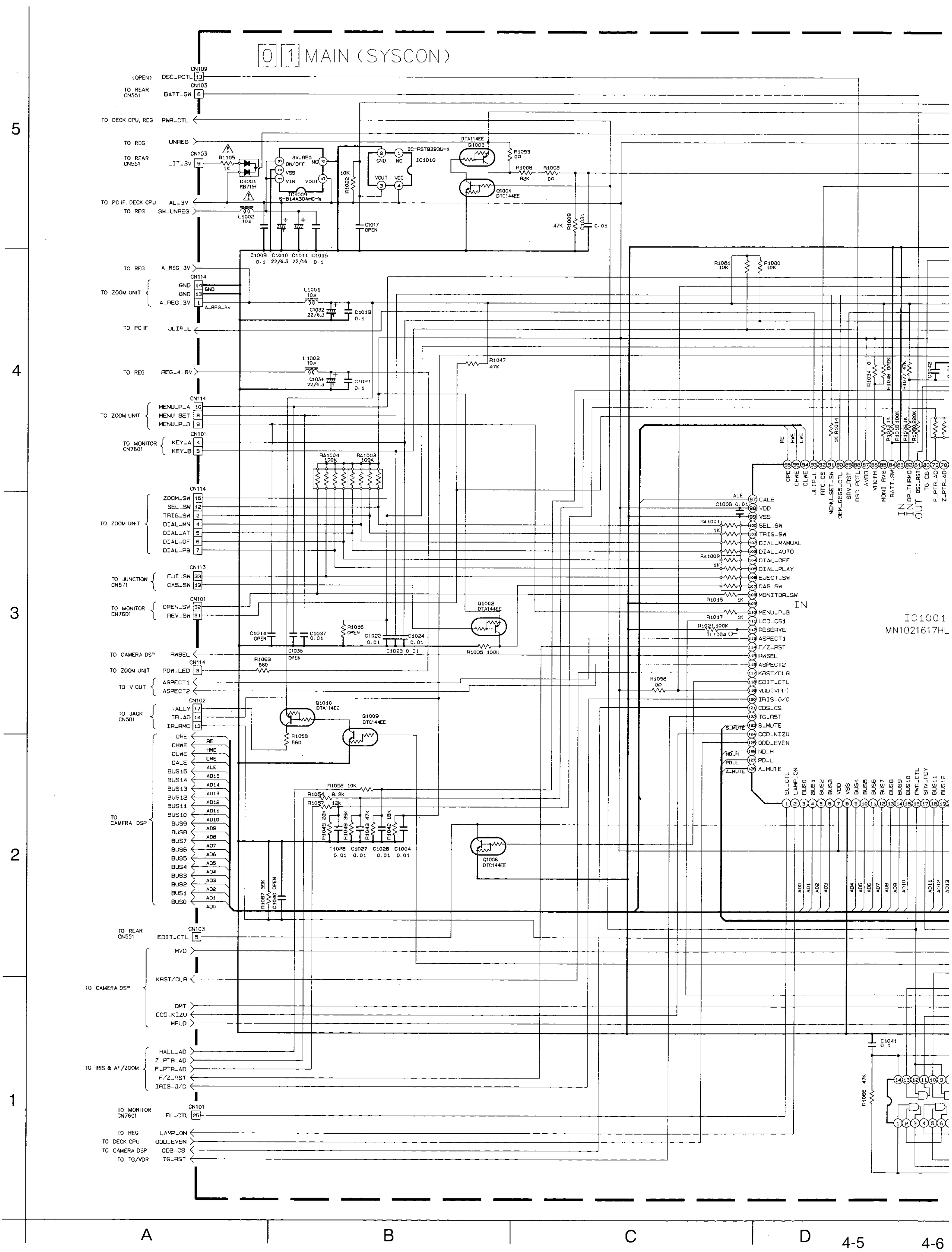
4.1 BOARD INTERCONNECTIONS


LCD MODULE
BL
EL
CN7502
03 LCD BL (Page 4-35)
CN7503
CN7504
CN7501
YTU94129A-33
YTU94109-33
MIC
CN106
01 MAIN
CN101
B/W VF
CN7203
CN7201
LCD MODULE
(For DVL100/DVL300/DVL307/DVL507)
08 B/W-VF B/W VFIF (Page 4-41)
CN7202
CN7602
02 MONITOR
MONITOR (Page 4-33)
CN7604
AUDIO (Page 4-13)
CN7551
LCD MODULE
(For DVL305/DVL500)
VF BL (Page 4-43)
CN7552
CN7603
B/W VF (Page 4-31)
DECK OPE (Page 4-33)
CN7601
DV EQ (Page 4-17)
SPEAKER
CN7605
YTU94074-22
YTU94077-22
A/V OUT
CN501
CN102
06 JACK (Page 4-39)
IR/WB
DV
S OUT
PC IF (Page 4-7)
V OUT (Page 4-21)
DEC
JLIP
PC
CN103
07 REAR (Page 4-40)
LIT
CN551
BATT. TERM
REG (Page 4-29)
PRE/REC (Page 4-19)
MDA (Page 4-11)
CN104
DC LIGHT
CN110
CN111
CN112
HEAD
YTU94074-6
YTU94077-6
R.E.SW
ROTARY ENCODER SW
CAPSTAN MOTOR
A
B
C
D
1
2
3
4
5

NOTE) * : The number of patch cords are indicated by interconnected.

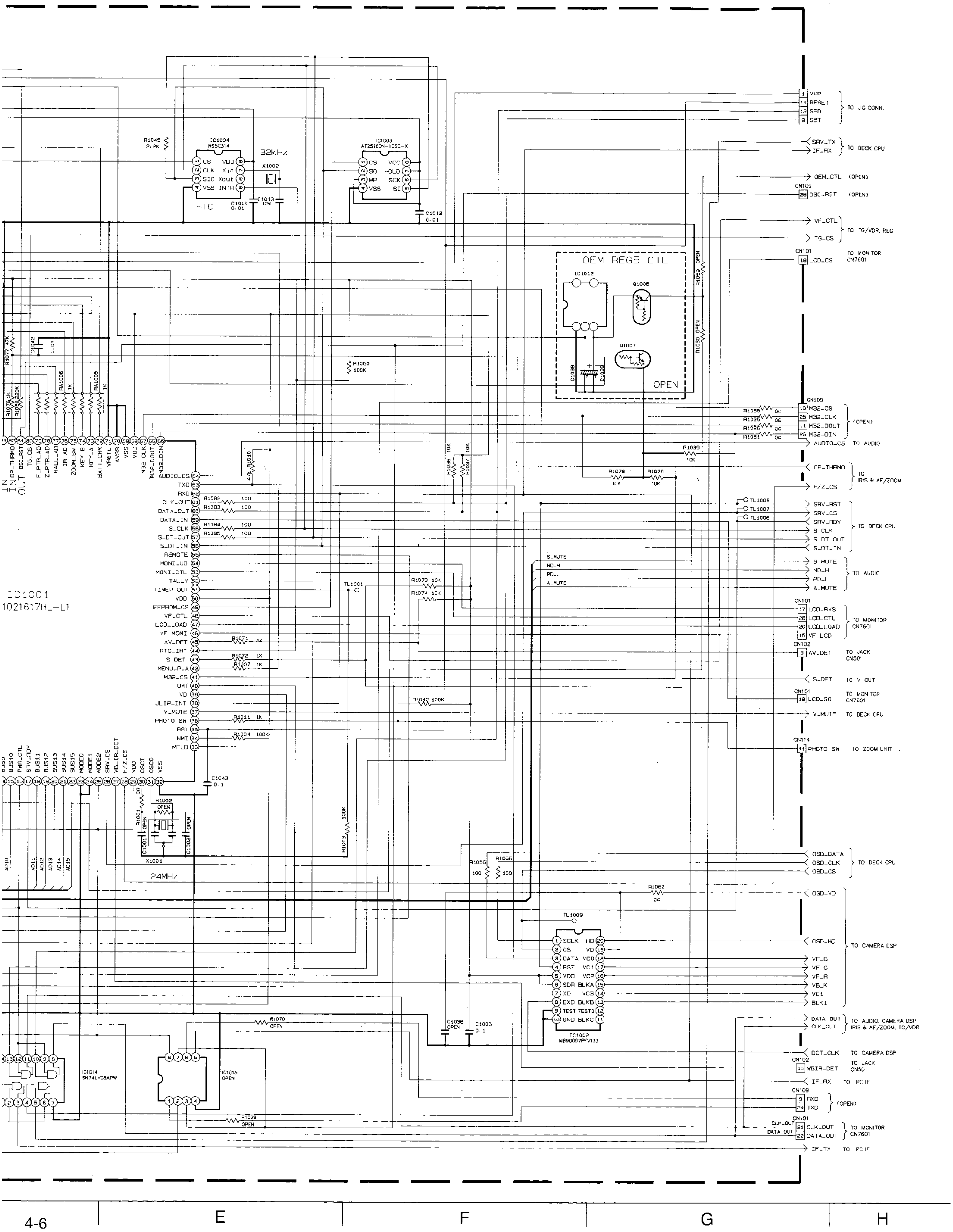

OP BLOCK
04 CCD (Page 4-37)
CN107
CN108
*{YTU94074-18 YTU94077-18
*{YTU94074-24 YTU94077-24
TG/VDR (Page 4-27)
IRIS & AF/ZOOM (Page 4-25)
CN109
CN801
10 DSC
OPEN
DV DSP (Page 4-15)
CAMERA DSP (Page 4-23)
DECK CPU (Page 4-9)
SYSCON (Page 4-5)
CN114
ZOOM UNIT (Page 4-42)
*{YTU94074-15 YTU94077-15
CN113
CN105
JIG CONN.
YTU93082E
CN571
05 JUNCTION (Page 4-38)
CN572
CN573
CN574
SENSOR
DRUM MOTOR
LOADING MOTOR
AN MOTOR

4.2 SYSCON SCHEMATIC DIAGRAM


NC
0 1 MAIN (SYSCON)
(OPEN) DSC_PCTL CN109 13
TO REAR CN551 BATT_SW CN103 6
TO DECK CPU, REG PWR_CTL
TO REG UNREG
TO REAR CN551 LIT_3V CN103 9
TO PC IF, DECK CPU AL_3V
TO REG SW_UNREG
R1005 1K
D1001 RB715F
L1002 10μ
IC1009 S-814A30AHC-W
3V_REG ON/OFF NC VSS VIN VOUT
IC1010 IC-PST9323U-X
GND NC VOUT VCC
R1022 10K
C1017 OPEN
DTA114EE Q1003
R1053 0Ω
R1006 82K
R1008 0Ω
Q1004 DTC144EE
R1009 47K
C1031 0.01
C1009 0.1 C1010 22/6.3 C1011 22/16 C1016 0.1
TO REG A_REG_3V
TO ZOOM UNIT CN114 GND 14 GND 13 A_REG_3V 1
L1001 10μ
C1032 22/6.3
C1019 0.1
R1081 10K R1080 10K
TO PC IF JLIP_L
L1003 10μ
C1034 22/6.3 C1021 0.1
R1047 47K
TO REG REG_4.8V
TO ZOOM UNIT CN114 MENU_P_A 10 MENU_SET 8 MENU_P_B 9
TO MONITOR CN7601 CN101 KEY_A 4 KEY_B 5
RA1004 100K RA1003 100K
TO ZOOM UNIT CN114 ZOOM_SW 15 SEL_SW 12 TRIG_SW 2 DIAL_MN 4 DIAL_AT 5 DIAL_OF 6 DIAL_PB 7
TO JUNCTION CN571 CN113 EJT_SW 33 CAS_SW 19
TO MONITOR CN7601 CN101 OPEN_SW 32 REV_SW 31
C1014 OPEN C1035 OPEN C1037 0.01
R1016 OPEN
C1022 0.01 C1023 0.01 C1024 0.01
Q1002 DTA144EE
R1035 100K
TO CAMERA DSP RWSEL
TO ZOOM UNIT CN114 PDW_LED 3
R1063 680
TO V OUT ASPECT1 ASPECT2
R1058 0Ω
TO JACK CN501 CN102 TALLY 17 IR_AD 14 IR_RMC 13
Q1010 DTA114EE
Q1009 DTC144EE
R1059 560
TO CAMERA DSP CRE CHWE CLWE CALE BUS15 BUS14 BUS13 BUS12 BUS11 BUS10 BUS9 BUS8 BUS7 BUS6 BUS5 BUS4 BUS3 BUS2 BUS1 BUS0
RE HWE LWE ALE AD15 AD14 AD13 AD12 AD11 AD10 AD9 AD8 AD7 AD6 AD5 AD4 AD3 AD2 AD1 AD0
R1052 10K R1054 8.2K R1057 12K
R1049 22K R1048 39K R1043 47K R1042 18K
C1028 0.01 C1027 0.01 C1026 0.01 C1004 0.01
Q1008 DTC144EE
R1067 39K C1040 OPEN
TO REAR CN551 CN103 EDIT_CTL 5
TO CAMERA DSP MVD KRST/CLR DMT CCD_KIZU MFLD
TO IRIS & AF/ZOOM HALL_AD Z_PTR_AD F_PTR_AD F/Z_RST IRIS_O/C
TO MONITOR CN7601 CN101 EL_CTL 25
TO REG LAMP_ON
TO DECK CPU ODD_EVEN
TO CAMERA DSP CDS_CS
TO TG/VDR TG_RST
ALE C1008 0.01
RA1001 1K RA1002 1K
R1015 1K R1017 1K R1021 100K TL1004
97 CALE 98 VDD 99 VSS 100 SEL_SW 101 TRIG_SW 102 DIAL_MAMUAL 103 DIAL_AUTO 104 DIAL_OFF 105 DIAL_PLAY 106 EJECT_SW 107 CAS_SW 108 MONITOR_SW 109 110 MENU_P_B 111 LCD_CS1 112 RESERVE 113 ASPECT1 114 F/Z_RST 115 RWSEL 116 ASPECT2 117 KRST/CLR 118 EDIT_CTL 119 VDD(VPP) 120 IRIS_O/C 121 CDS_CS 122 TG_RST 123 S_MUTE 124 CCD_KIZU 125 ODD_EVEN 126 ND_H 127 PD_L 128 A_MUTE
S_MUTE ND_H PD_L A_MUTE
IN
IC1001 MN1021617HL
CRE CHWE CLWE JLIP_L RTC_CS MENU_SET_SW DEM_GEGE_CTL SRV_RST DSC_PCTL AVDD VREFH MONI_RVS BATT_SW DP_THRMO TG_CS F_PTR_AD Z_PTR_AD
96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80 79 78
RE HWE LWE
R1014 1K R1034 0 R1046 OPEN R1077 47K R1013 1K R1018 100K R1078 1K R1080 220K C1042
IN IN OUT
EL_CTL LAMP_ON BUS0 BUS1 BUS2 BUS3 VDD VSS BUS4 BUS5 BUS6 BUS7 BUS8 BUS9 BUS10 PWR_CTL SRV_RDY BUS11 BUS12
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
AD0 AD1 AD2 AD3 AD4 AD5 AD6 AD7 AD8 AD9 AD10 AD11 AD12 AD13
C1041 0.1
R1066 47K
14 13 12 11 10 9
1 2 3 4 5 6
5 4 3 2 1
A B C D

NOTES: ● ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***

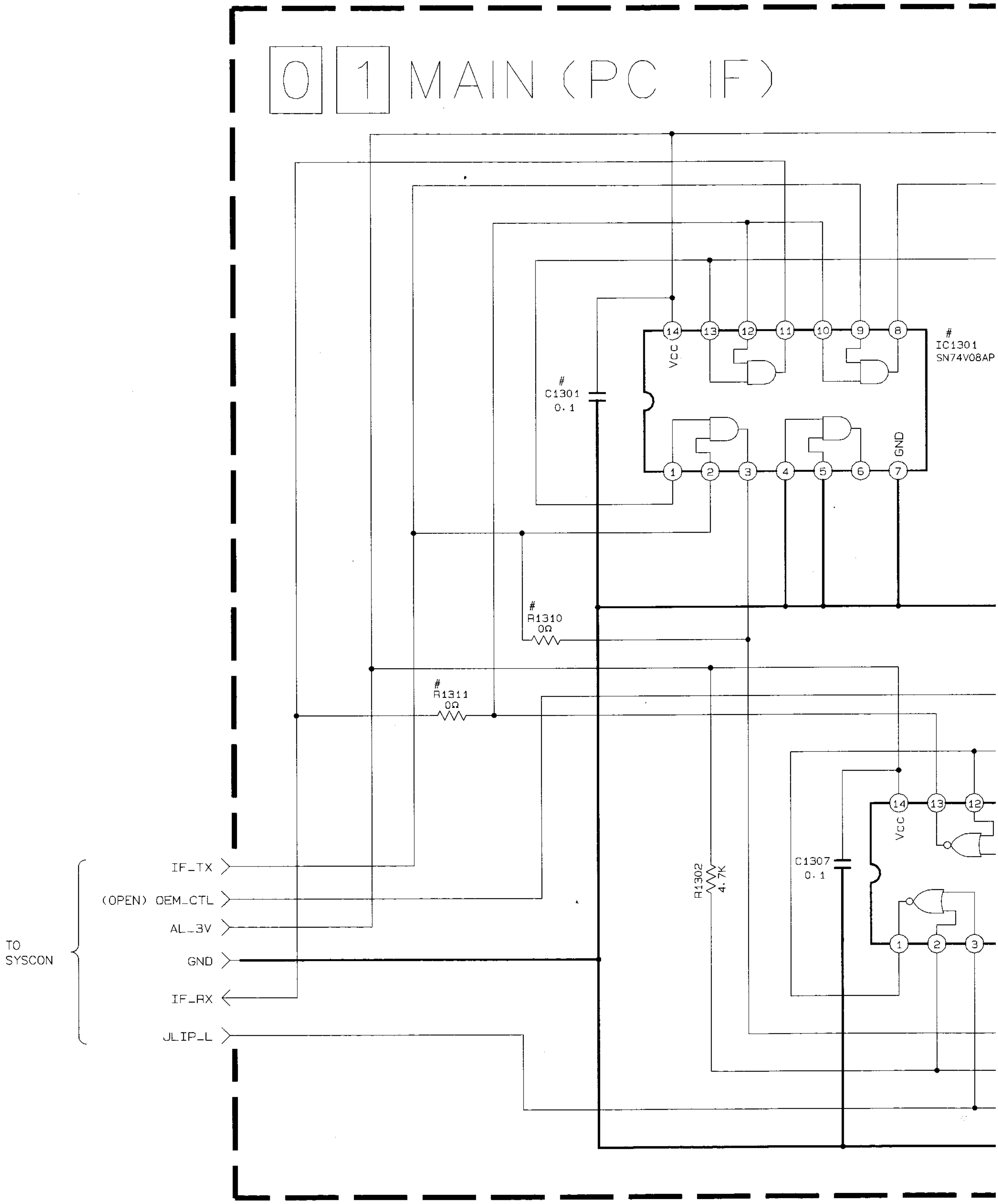
● ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***



IC1001
1021617HL-L1
IC1004
RS5C314
CS
CLK
SIO
VSS
VDD
Xin
Xout
INTR
32kHz
X1002
RTC
C1015 0.01
C1013 12p
R1045 2.2K
IC1003
AT25160N-10SC-X
CS
SO
WP
VSS
VCC
HOLD
SCK
SI
C1012 0.01
OEM_REG5_CTL
IC1012
Q1006
Q1007
C1038
C1039
OPEN
R1059 OPEN
R1030 OPEN
R1050 100K
R1077 47K
C1042 0.01
R1006
R1005
R1076 1K
R1080 220K
R1010 47K
R1036 10K
R1037 10K
R1055 0Ω
R1025 0Ω
R1026 0Ω
R1051 0Ω
R1039 10K
R1078 10K
R1079 10K
OP_THRMO
DSC_RST
TG_CS
F_PTR_AD
Z_PTR_AD
HALL_AD
IR_AD
ZOOM_SW
KEY_B
KEY_A
BATT_CHK
VRefL
AVSS
VSS
VDD
M32_CLK
M32_DOUT
M32_DIN
AUDIO_CS 64
TXD 63
RXD 62
CLK_OUT 61
DATA_OUT 60
DATA_IN 59
S_CLK 58
S_DT_OUT 57
S_DT_IN 56
REMOTE 55
MONI_UD 54
MONI_CTL 53
TALLY 52
TIMER_OUT 51
VDD 50
EEPROM_CS 49
VF_CTL 48
LCD_LOAD 47
VF_MONI 46
AV_DET 45
RTC_INT 44
S_DET 43
MENU_P_A 42
M32_CS 41
OMT 40
VD 39
JLIP_INT 38
V_MUTE 37
PHOTO_SW 36
RST 35
NMI 34
MFLD 33
R1082 100
R1083 100
R1084 100
R1085 100
R1071 1K
R1072 1K
R1007 1K
R1011 1K
R1004 100K
R1012 100K
R1073 10K
R1074 10K
TL1001
C1043 0.1
BUS10
PWR_CTL
SRV_RDY
BUS11
BUS12
BUS13
BUS14
BUS15
MODE0
MODE1
MODE2
SRV_CS
WB_IR_DET
F/Z_CS
VDD
OSCI
OSCO
VSS
R1002 OPEN
R1001 OPEN
C1001
C1002 OPEN
X1001
24MHz
R1003 100K
AD10
AD11
AD12
AD13
AD14
AD15
R1056 100
R1055 100
R1062 0Ω
TL1009
IC1002
MB90097PFV133
SCLK
CS
DATA
RST
VDD
SDR
XD
EXD
TEST
GND
HD
VD
VCO
VC1
VC2
BLKA
VC3
BLKB
TESTO
BLKC
C1036 OPEN
C1003 0.1
S_MUTE
ND_H
PD_L
A_MUTE
R1070 OPEN
R1069 OPEN
IC1014
SN74LV08APW
IC1015
OPEN
TL1008
TL1007
TL1006
1 VPP
11 RESET
12 SBD
9 SBT
TO JIG CONN.
SRV_TX
IF_RX
TO DECK CPU
OEM_CTL (OPEN)
CN109
28 DSC_RST (OPEN)
VF_CTL
TG_CS
TO TG/VDR, REG
CN101
19 LCD_CS
TO MONITOR CN7601
CN109
10 M32_CS
25 M32_CLK
11 M32_DOUT
26 M32_DIN
(OPEN)
AUDIO_CS TO AUDIO
OP_THRMO
F/Z_CS
TO IRIS & AF/ZOOM
SRV_RST
SRV_CS
SRV_RDY
S_CLK
S_DT_OUT
S_DT_IN
TO DECK CPU
S_MUTE
ND_H
PD_L
A_MUTE
TO AUDIO
CN101
17 LCD_RVS
28 LCD_CTL
20 LCD_LOAD
15 VF_LCD
TO MONITOR CN7601
CN102
5 AV_DET
TO JACK CN501
S_DET
TO V OUT
CN101
19 LCD_SO
TO MONITOR CN7601
V_MUTE
TO DECK CPU
CN114
11 PHOTO_SW
TO ZOOM UNIT
OSD_DATA
OSD_CLK
OSD_CS
TO DECK CPU
OSD_VD
OSD_HD
VF_B
VF_G
VF_R
VBLK
VC1
BLK1
TO CAMERA DSP
DATA_OUT
CLK_OUT
TO AUDIO, CAMERA DSP IRIS & AF/ZOOM, TG/VDR
DOT_CLK
TO CAMERA DSP
CN102
15 WBIR_DET
TO JACK CN501
IF_RX
TO PC IF
CN109
6 RXD
24 TXD
(OPEN)
CN101
CLK_OUT
DATA_OUT
21 CLK_OUT
22 DATA_OUT
TO MONITOR CN7601
IF_TX
TO PC IF
E
F
G
H

4.3 PC IF SCHEMATIC DIAGRAM

NOTES:* ● *For
this
● Whe

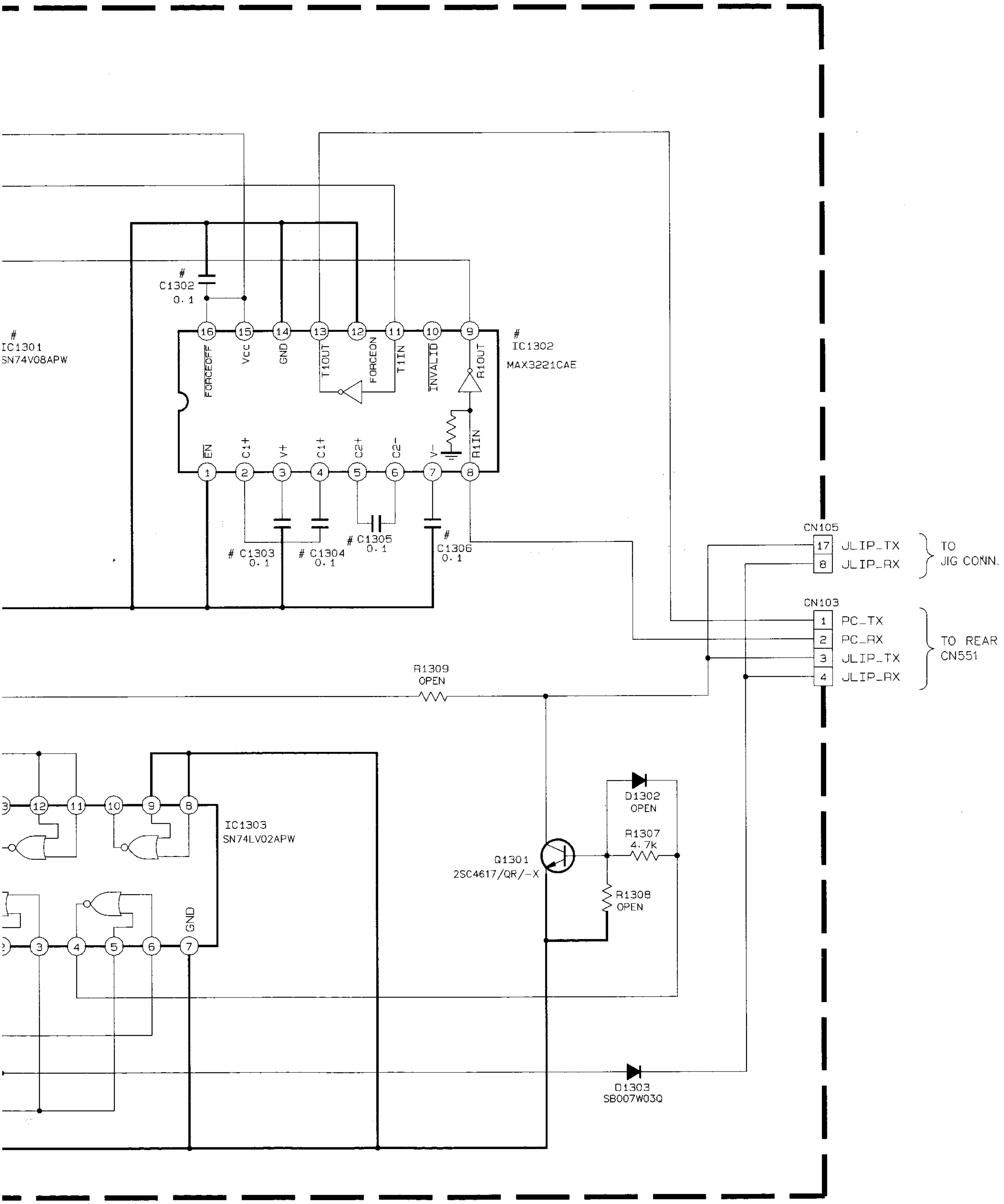


0 1 MAIN (PC IF)
IC1301
SN74V08AP
C1301
0.1
Vcc
GND
R1310
0Ω
R1311
0Ω
R1302
4.7K
C1307
0.1
IF_TX
(OPEN) OEM_CTL
AL_3V
GND
IF_RX
JLIP_L
TO
SYSCON
5
4
3
2
1
A
B
C
D

NOTE : COMPARISION CHART OF MODELS (#).

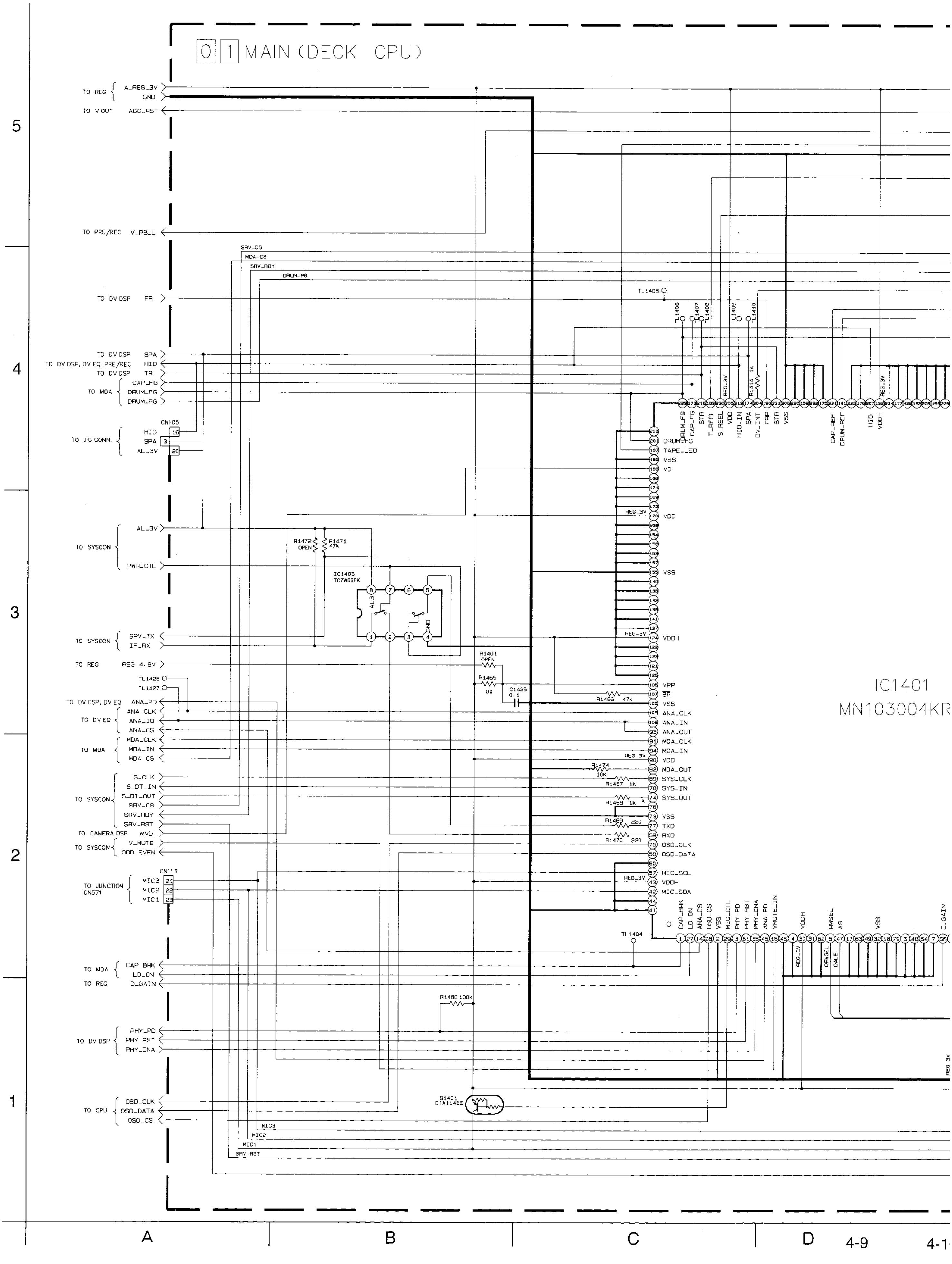
REF. NO MODELS	IC1301 IC1302	R1310 R1311	C1301 ~ C1306
GR-DVL100	OPEN	USED	OPEN
GR-DVL300	USED	OPEN	USED
GR-DVL305	OPEN	USED	OPEN
GR-DVL307	OPEN	USED	OPEN
GR-DVL500	USED	OPEN	USED
GR-DVL507	USED	OPEN	USED

- ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***
- ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***



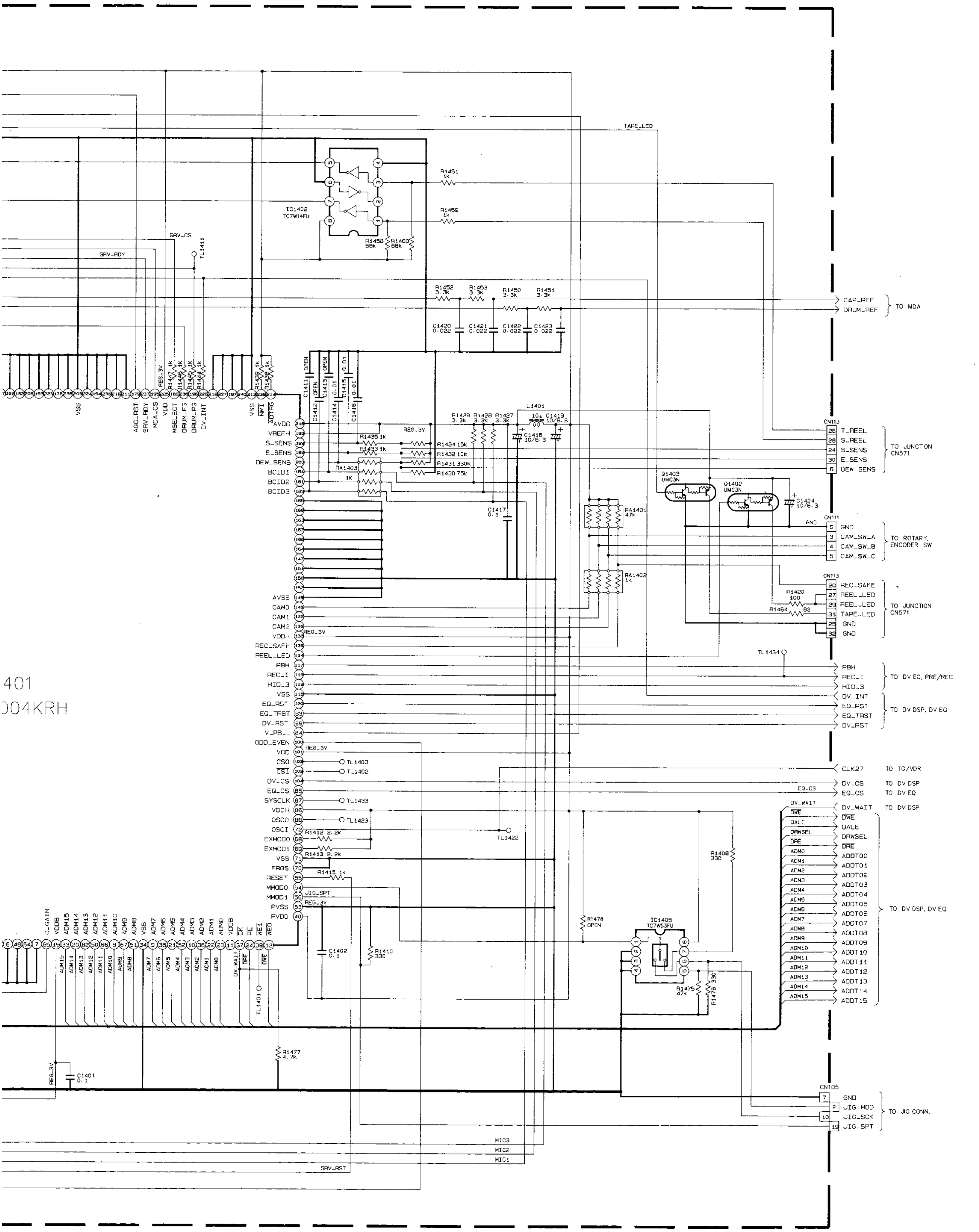
#
C1302
0.1
#
IC1301
SN74V08APW
16 FORCEOFF
15 Vcc
14 GND
13 T1OUT
12 FORCEON
11 T1IN
10 INVALID
9 R1OUT
1 EN
2 C1+
3 V+
4 C1+
5 C2+
6 C2-
7 V-
8 R1IN
#
IC1302
MAX3221CAE
# C1303
0.1
# C1304
0.1
# C1305
0.1
#
C1306
0.1
CN105
17 JLIP_TX
8 JLIP_RX
TO
JIG CONN.
CN103
1 PC_TX
2 PC_RX
3 JLIP_TX
4 JLIP_RX
TO REAR
CN551
R1309
OPEN
IC1303
SN74LV02APW
GND
D1302
OPEN
R1307
4.7k
Q1301
2SC4617/QR/-X
R1308
OPEN
D1303
SB007W03Q

4.4 DECK CPU SCHEMATIC DIAGRAM


01 MAIN (DECK CPU)
TO REG A_REG_3V
GND
TO V OUT AGC_RST
TO PRE/REC V_PB_L
SRV_CS
MDA_CS
SRV_RDY
DRUM_PG
TO DV DSP FR
TO DV DSP SPA
TO DV DSP, DV EQ, PRE/REC HID
TO DV DSP TR
TO MDA CAP_FG
DRUM_FG
DRUM_PG
CN105
TO JIG CONN. HID
SPA
AL_3V
TO SYSCON AL_3V
PWR_CTL
R1472 OPEN
R1471 47k
IC1403 TC7W66FK
TO SYSCON SRV_TX
IF_RX
TO REG REG_4.8V
TL1426
TL1427
TO DV DSP, DV EQ ANA_PD
TO DV EQ ANA_CLK
ANA_IO
ANA_CS
TO MDA MDA_CLK
MDA_IN
MDA_CS
TO SYSCON S_CLK
S_DT_IN
S_DT_OUT
SRV_CS
SRV_RDY
SRV_RST
TO CAMERA DSP MVD
TO SYSCON V_MUTE
ODD_EVEN
CN113
TO JUNCTION CN571 MIC3
MIC2
MIC1
TO MDA CAP_BRK
LD_ON
TO REG D_GAIN
R1480 100k
TO DV DSP PHY_PD
PHY_RST
PHY_CNA
Q1401 DTA114EE
TO CPU OSD_CLK
OSD_DATA
OSD_CS
MIC3
MIC2
MIC1
SRV_RST
R1401 OPEN
R1465 0Ω
C1425 0.1
R1466 47k
R1474 10K
R1467 1k
R1468 1k
R1469 220
R1470 220
TL1404
TL1405
TL1406
TL1407
TL1408
TL1409
TL1410
R1414 1k
REG_3V
DRUM_FG
CAP_FG
STR
T_REEL
S_REEL
VDD
HID_IN
SPA
DV_INT
FRP
STR
VSS
CAP_REF
DRUM_REF
HID
VDDH
DRUM_FG
TAPE_LED
VSS
VD
VDD
VSS
VDDH
VPP
BR
VSS
ANA_CLK
ANA_IN
ANA_OUT
MDA_CLK
MDA_IN
VDD
MDA_OUT
SYS_CLK
SYS_IN
SYS_OUT
VSS
TXD
RXD
OSD_CLK
OSD_DATA
MIC_SCL
VDDH
MIC_SDA
CAP_BRK
LD_ON
ANA_CS
OSD_CS
VSS
MIC_CTL
PHY_PD
PHY_RST
PHY_CNA
ANA_PD
VMUTE_IN
VDDH
RWSEL
AS
VSS
D_GAIN
DRWSEL
DALE
IC1401
MN103004KR
5
4
3
2
1
A
B
C
D

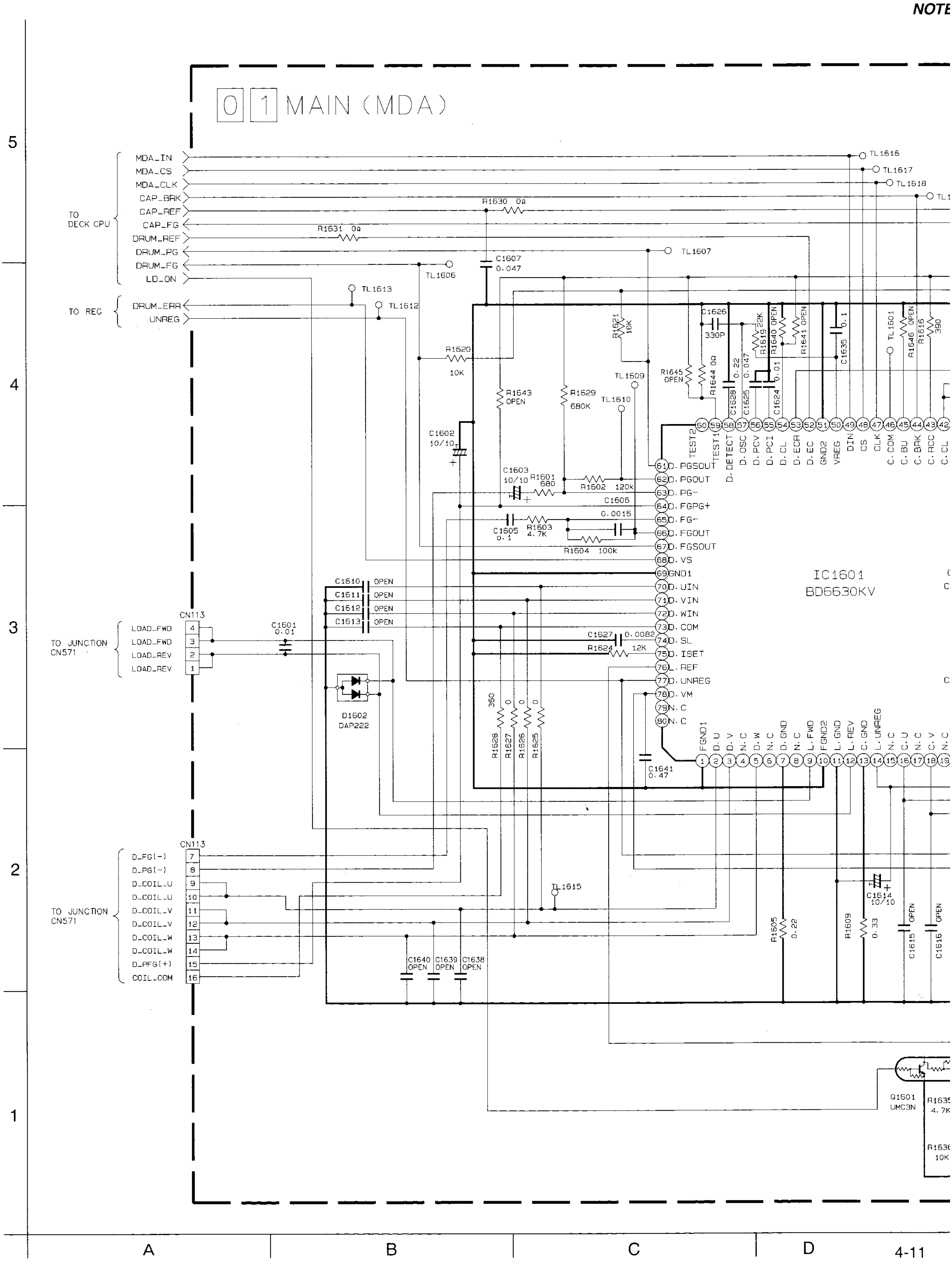
NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*

● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*

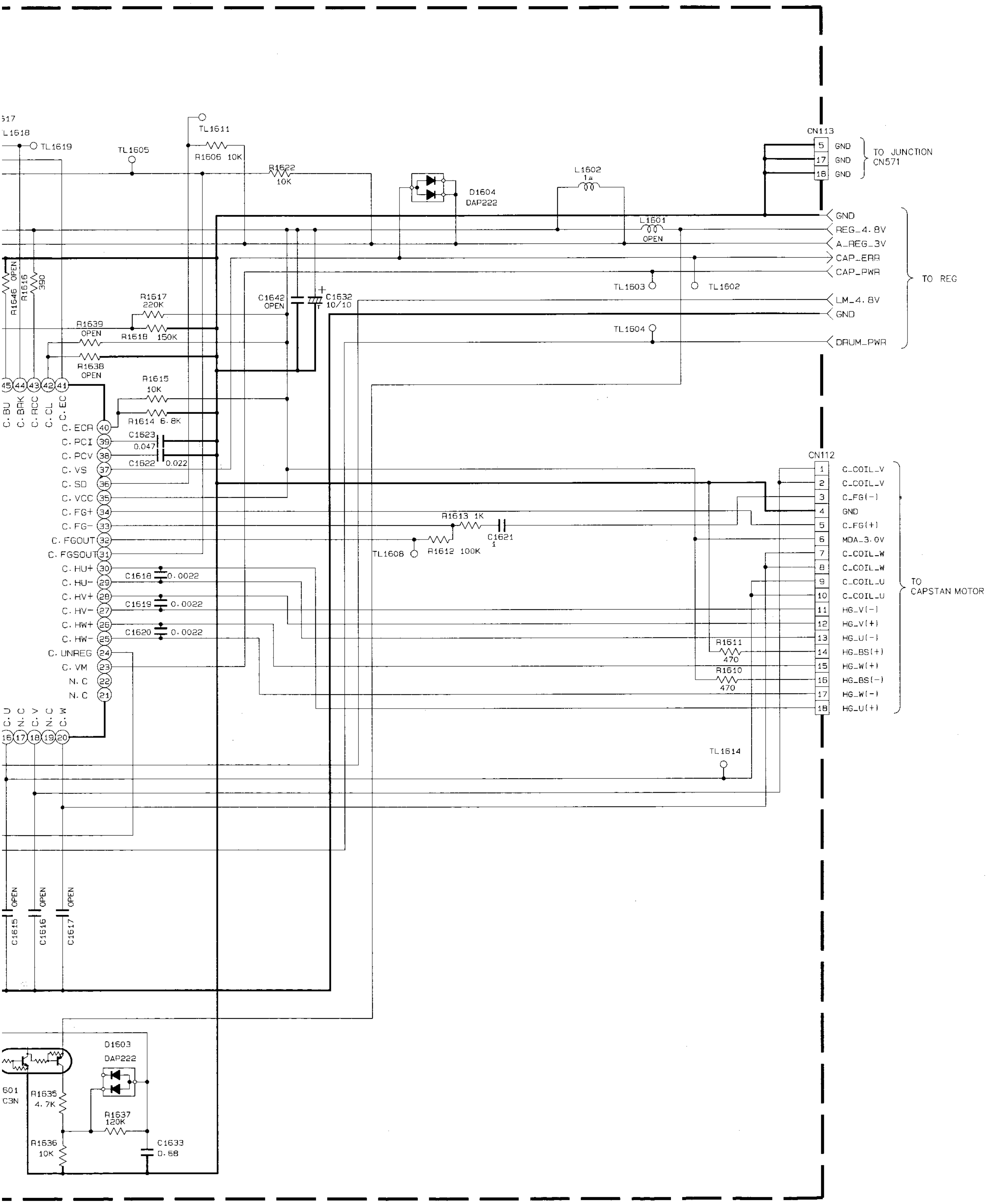


TAPE_LED
IC1402
TC7W14FU
R1451 1k
R1459 1k
R1458 68k
R1460 68k
SRV_CS
SRV_RDY
TL1411
R1452 3.3k
R1453 3.3k
R1450 3.3k
R1451 3.3k
C1420 0.022
C1421 0.022
C1422 0.022
C1423 0.022
CAP_REF
DRUM_REF
TO MDA
VSS
AGC_RST
SRV_RDY
MDA_CS
VDD
REG_3V
MSELECT
DRUM_FG
DRUM_PG
DV_INT
R1447 1k
R1446 1k
R1445 1k
R1444 1k
R1439 1k
R1438 1k
NMI
ADTRG
C1411 OPEN
C1412 OPEN
C1413 OPEN
C1414 0.01
C1415 0.01
C1416 0.01
L1401
C1419 10/6.3
C1418 10/6.3
R1429 3.3k
R1428 3.3k
R1427 3.3k
AVDD
VREFH
S_SENS
E_SENS
DEW_SENS
BCID1
BCID2
BCID3
R1435 1k
R1433 1k
RA1403 1k
R1434 15k
R1432 10k
R1431 330k
R1430 75k
CN113
T_REEL
S_REEL
S_SENS
E_SENS
DEW_SENS
TO JUNCTION CN571
Q1403 UMC3N
Q1402 UMC3N
C1424 10/6.3
C1417 0.1
RA1401 47k
RA1402 1k
CN111
GND
CAM_SW_A
CAM_SW_B
CAM_SW_C
TO ROTARY, ENCODER SW
REC_SAFE
REEL_LED
TAPE_LED
R1420 100
R1464 82
AVSS
CAM0
CAM1
CAM2
VDDH
REC_SAFE
REEL_LED
PBH
REC_I
HID_3
VSS
EQ_RST
EQ_TRST
DV_RST
V_PB_L
ODD_EVEN
VDD
CS0
CS1
DV_CS
EQ_CS
SYSCLK
VDDH
OSC0
OSCI
EXMOD0
EXMOD1
VSS
FRQS
RESET
MMOD0
MMOD1
PVSS
PVDD
401
004KRH
TL1434
TO DV EQ, PRE/REC
DV_INT
TO DV DSP, DV EQ
TL1403
TL1402
TL1433
TL1423
TL1422
R1412 2.2k
R1413 2.2k
R1415 1k
JIG_SPT
CLK27
TO TG/VDR
TO DV DSP
TO DV EQ
DV_WAIT
DWE
DALE
DRWSEL
DRE
ADDT00
ADDT01
ADDT02
ADDT03
ADDT04
ADDT05
ADDT06
ADDT07
ADDT08
ADDT09
ADDT10
ADDT11
ADDT12
ADDT13
ADDT14
ADDT15
R1408 330
R1478 OPEN
IC1405 TC7W53FU
R1475 47k
R1476 330
C1402 0.1
R1410 330
D_GAIN
VDDB
ADM15
ADM14
ADM13
ADM12
ADM11
ADM10
ADM9
ADM8
ADM7
ADM6
ADM5
ADM4
ADM3
ADM2
ADM1
ADM0
TL1401
R1477 4.7k
C1401 0.1
CN105
GND
JIG_MOD
JIG_SCK
JIG_SPT
TO JIG CONN.
MIC3
MIC2
MIC1
SRV_RST

4.5 MDA SCHEMATIC DIAGRAM

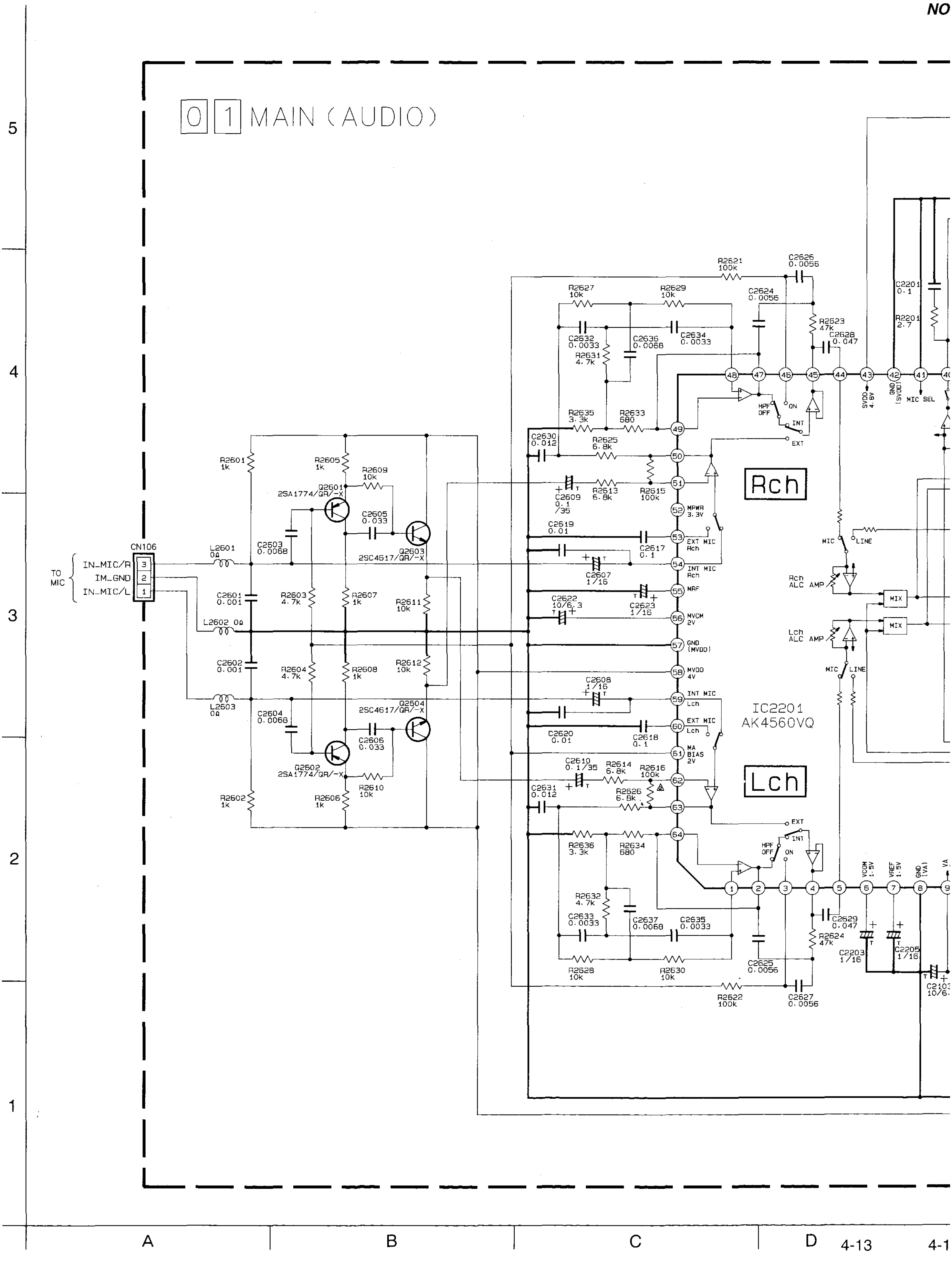

NOTE
5
4
3
2
1
A
B
C
D
0 1 MAIN (MDA)
TO DECK CPU
MDA_IN
MDA_CS
MDA_CLK
CAP_BRK
CAP_REF
CAP_FG
DRUM_REF
DRUM_PG
DRUM_FG
LD_ON
TO REG
DRUM_ERR
UNREG
TL1616
TL1617
TL1618
R1630 0Ω
R1631 0Ω
TL1607
C1607 0.047
TL1606
TL1613
TL1612
R1620 10K
R1643 OPEN
R1629 680K
R1621 10K
TL1609
TL1610
C1602 10/10
C1603 10/10
R1601 680
R1602 120k
C1606 0.0015
C1605 0.1
R1603 4.7K
R1604 100k
C1626 330P
R1645 OPEN
R1644 0Ω
C1628 0.22
C1625 0.047
R1619 22K
R1640 OPEN
C1624 0.01
R1641 OPEN
C1635 0.1
TL1601
R1646 OPEN
R1615 390
IC1601 BD6630KV
TEST2
TEST1
D.DETECT
D.OSC
D.PCV
D.PCI
D.CL
D.ECR
D.EC
GND2
VREG
DIN
CS
CLK
C.COM
C.BU
C.BRK
C.RCC
C.CL
D.PGSOUT
D.PGOUT
D.PG-
D.FGPG+
D.FG-
D.FGOUT
D.FGSOUT
D.VS
GND1
D.UIN
D.VIN
D.WIN
D.COM
D.SL
D.ISET
L.REF
D.UNREG
D.VM
N.C
N.C
FGND1
D.U
D.V
N.C
D.W
N.C
D.GND
N.C
L.FWD
FGND2
L.GND
L.REV
C.GND
L.UNREG
N.C
C.U
N.C
C.V
N.C
C1610 OPEN
C1611 OPEN
C1612 OPEN
C1613 OPEN
C1627 0.0082
R1624 12K
CN113
TO JUNCTION CN571
LOAD_FWD
LOAD_FWD
LOAD_REV
LOAD_REV
C1601 0.01
D1602 DAP222
R1628 360
R1627 0
R1626 0
R1625 0
C1641 0.47
D_FG(-)
D_PG(-)
D_COIL_U
D_COIL_U
D_COIL_V
D_COIL_V
D_COIL_W
D_COIL_W
D_PFG(+)
COIL_COM
TL1615
C1640 OPEN
C1639 OPEN
C1638 OPEN
R1605 0.22
R1609 0.33
C1614 10/10
C1615 OPEN
C1616 OPEN
Q1601 UMC3N
R1635 4.7K
R1636 10K

NOTES: ● ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***
● ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***



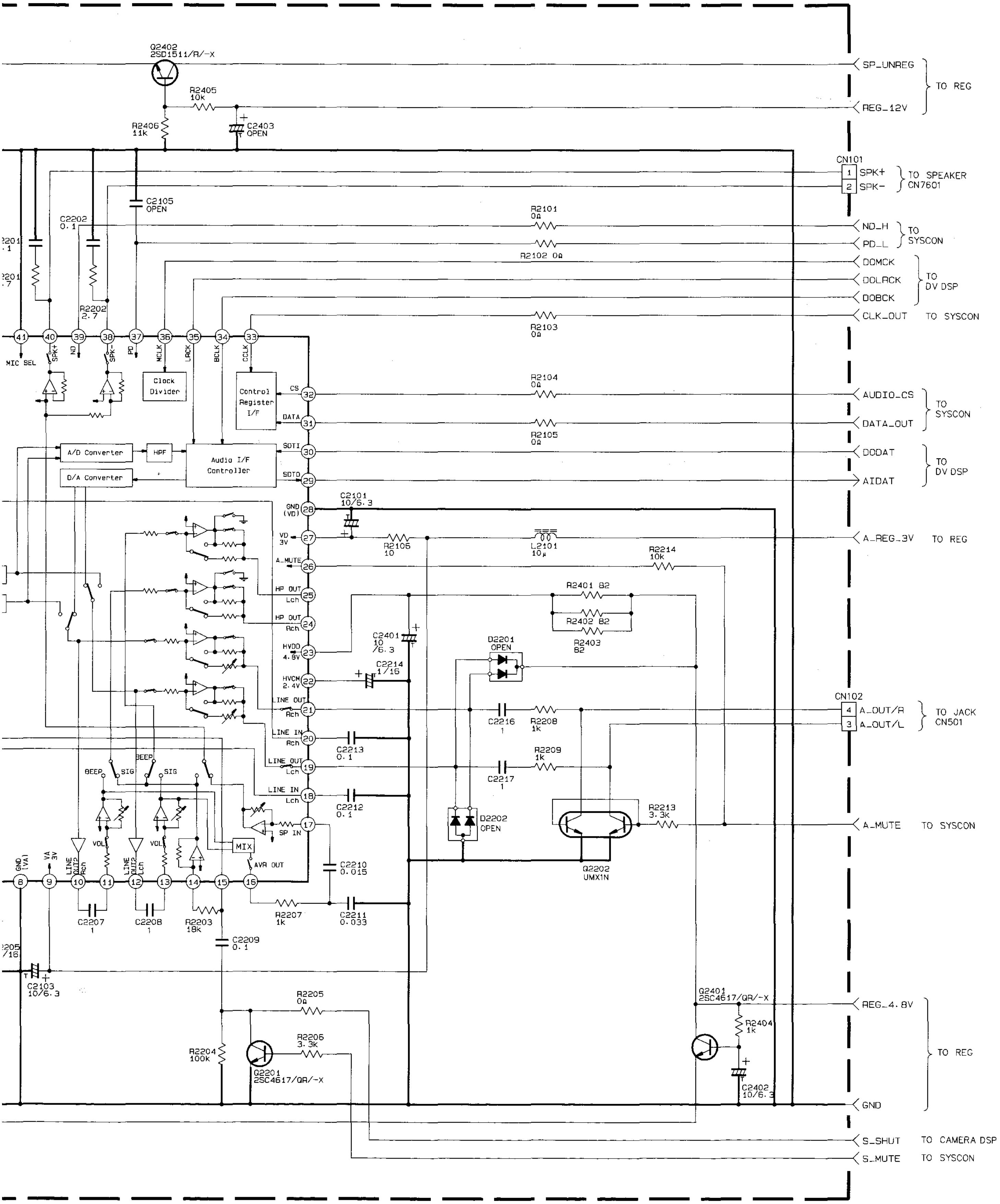
TL1618
TL1619
TL1611
TL1605
R1606 10K
R1622 10K
D1604 DAP222
L1602 1μ
L1601 OPEN
CN113
5 GND
17 GND
18 GND
TO JUNCTION CN571
GND
REG_4.8V
A_REG_3V
CAP_ERR
CAP_PWR
LM_4.8V
GND
DRUM_PWR
TO REG
TL1603
TL1602
TL1604
R1646 OPEN
R1616
390
R1617 220K
R1639 OPEN
R1618 150K
R1638 OPEN
C1642 OPEN
C1632 10/10
R1615 10K
R1614 6.8K
C1623 0.047
C1622 0.022
C.BU
C.BRK
C.RCC
C.CL
C.EC
C.ECR 40
C.PCI 39
C.PCV 38
C.VS 37
C.SD 36
C.VCC 35
C.FG+ 34
C.FG- 33
C.FGOUT 32
C.FGSOUT 31
C.HU+ 30
C.HU- 29
C.HV+ 28
C.HV- 27
C.HW+ 26
C.HW- 25
C.UNREG 24
C.VM 23
N.C 22
N.C 21
C.U
N.C
C.V
N.C
C.W
C1618 0.0022
C1619 0.0022
C1620 0.0022
R1613 1K
C1621 1
R1612 100K
TL1608
CN112
1 C_COIL_V
2 C_COIL_V
3 C_FG(-)
4 GND
5 C_FG(+)
6 MDA_3.0V
7 C_COIL_W
8 C_COIL_W
9 C_COIL_U
10 C_COIL_U
11 HG_V(-)
12 HG_V(+)
13 HG_U(-)
14 HG_BS(+)
15 HG_W(+)
16 HG_BS(-)
17 HG_W(-)
18 HG_U(+)
TO CAPSTAN MOTOR
R1611 470
R1610 470
TL1614
C1615 OPEN
C1616 OPEN
C1617 OPEN
D1603 DAP222
601
C3N
R1635 4.7K
R1637 120K
R1636 10K
C1633 0.68

4.6 AUDIO SCHEMATIC DIAGRAM

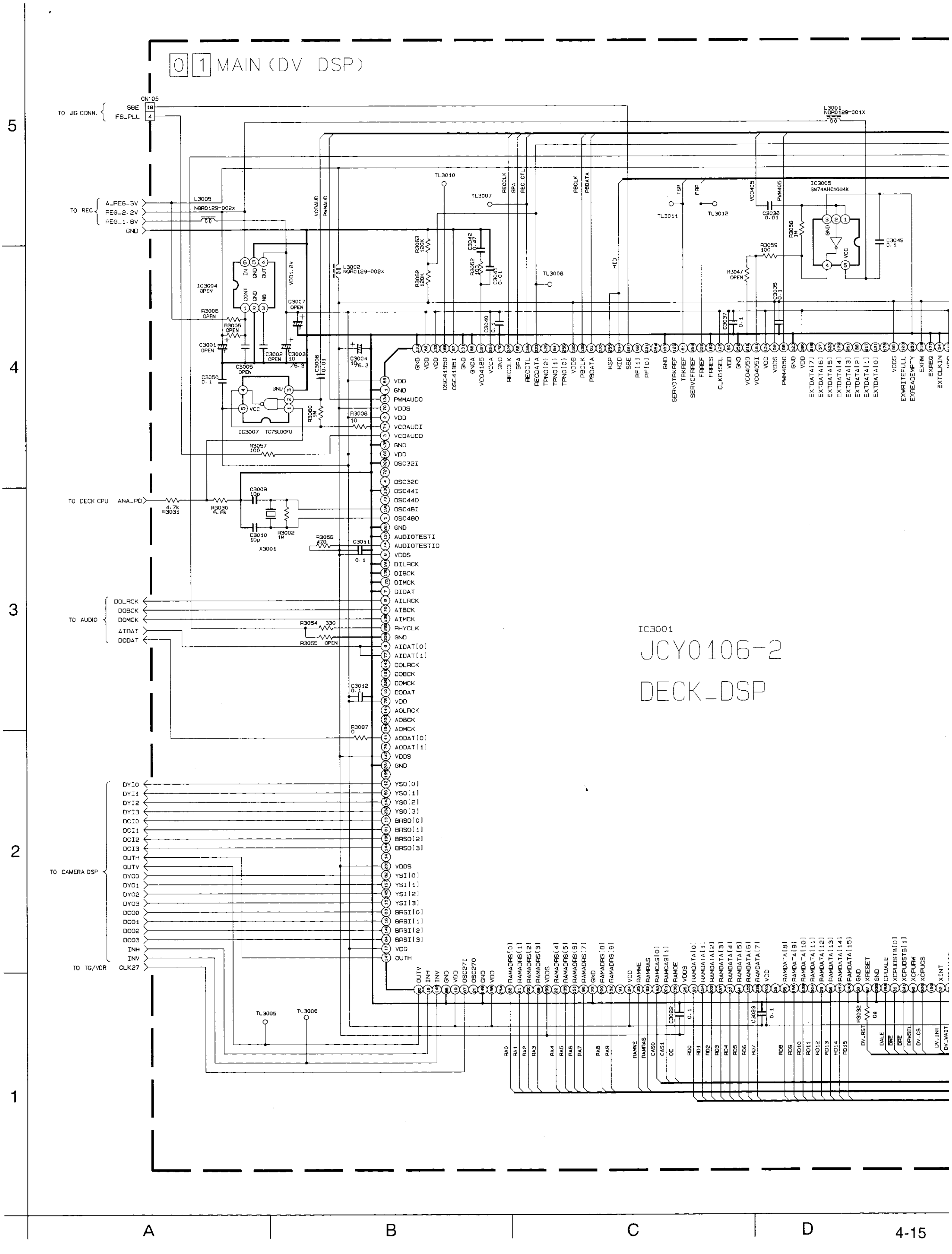


NO
01 MAIN (AUDIO)
5
4
3
2
1
A
B
C
D
CN106
IN_MIC/R 3
IM_GND 2
IN_MIC/L 1
TO MIC
L2601 0Ω
L2602 0Ω
L2603 0Ω
C2601 0.001
C2602 0.001
R2601 1k
R2602 1k
C2503 0.0068
C2604 0.0068
R2603 4.7k
R2604 4.7k
R2605 1k
R2606 1k
R2607 1k
R2608 1k
R2609 10k
R2610 10k
R2611 10k
R2612 10k
Q2601 2SA1774/QR/-X
Q2502 2SA1774/QR/-X
Q2603 2SC4617/QR/-X
Q2504 2SC4617/QR/-X
C2605 0.033
C2606 0.033
R2621 100k
R2622 100k
C2626 0.0056
C2627 0.0056
C2624 0.0056
C2625 0.0056
R2627 10k
R2628 10k
R2629 10k
R2630 10k
C2632 0.0033
C2633 0.0033
C2634 0.0033
C2635 0.0033
C2636 0.0068
C2637 0.0068
R2631 4.7k
R2632 4.7k
R2523 47k
R2624 47k
C2628 0.047
C2629 0.047
R2635 3.3k
R2636 3.3k
R2633 680
R2634 680
C2630 0.012
C2631 0.012
R2625 6.8k
R2626 6.8k
C2609 0.1 /35
C2610 0.1/35
R2613 6.8k
R2614 6.8k
R2615 100k
R2616 100k
C2519 0.01
C2620 0.01
C2617 0.1
C2618 0.1
C2607 1/16
C2608 1/16
C2622 10/6.3
C2623 1/16
C2201 0.1
R2201 2.7
C2203 1/16
C2205 1/16
C2103 10/6.
HPF OFF
ON
INT
EXT
MPWR 3.3V
EXT MIC Rch
INT MIC Rch
MRF
MVCM 2V
GND (MVDD)
MVDD 4V
INT MIC Lch
EXT MIC Lch
MA BIAS 2V
SVDD 4.8V
GND (SVDD)
MIC SEL
VCOM 1.5V
VREF 1.5V
GND (VA)
VA
MIC
LINE
Rch ALC AMP
Lch ALC AMP
MIX
Rch
Lch
IC2201 AK4560VQ
48 47 46 45 44 43 42 41 40
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
1 2 3 4 5 6 7 8 9

NOTES: ● For the destination of each signal and further line connections that are cut off from this diagram, refer to “4.1 BOARD INTERCONNECTIONS”.
● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

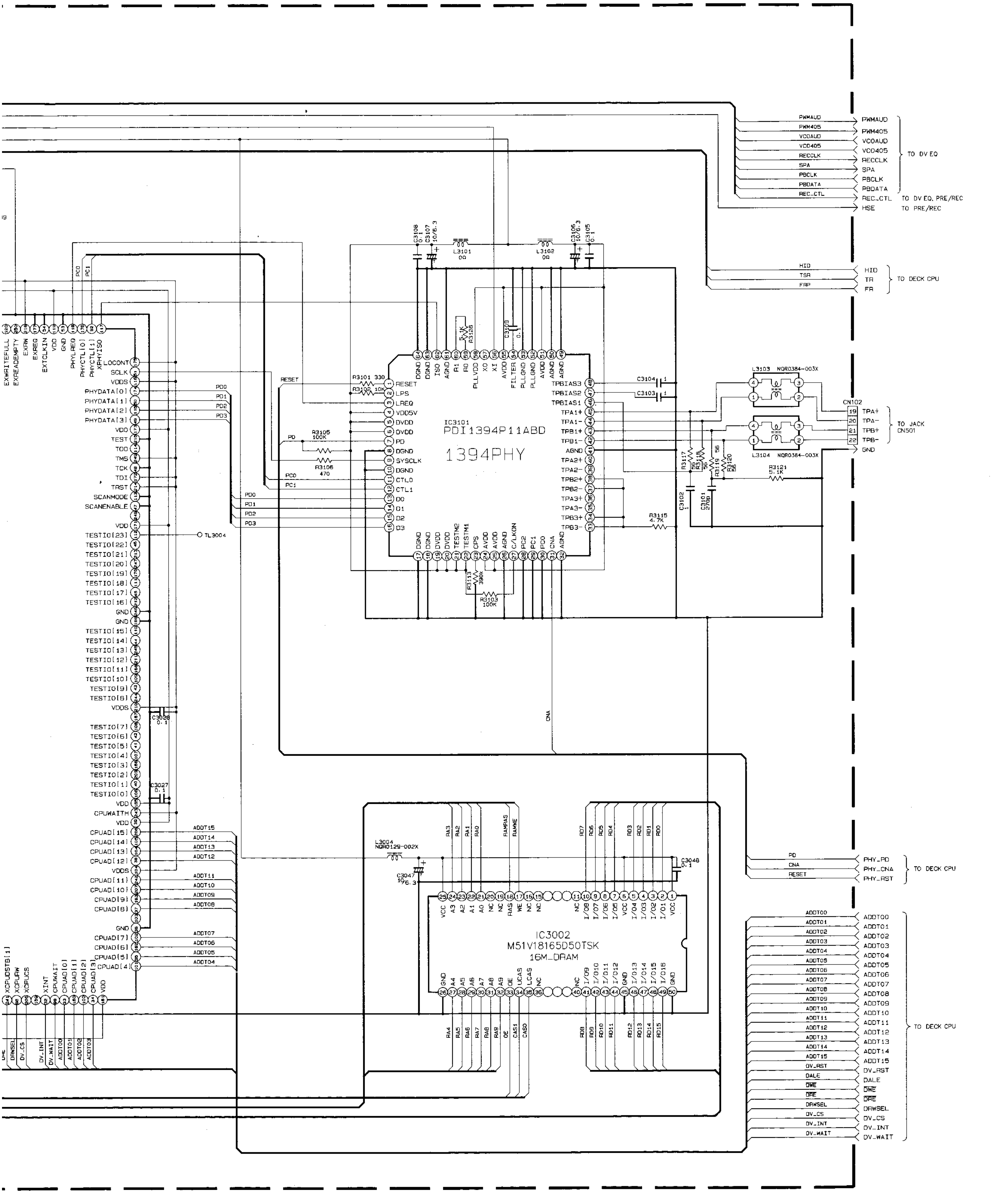

Q2402
2SD1511/R/-X
R2405
10k
R2406
11k
C2403
OPEN
SP_UNREG
REG_12V
TO REG
CN101
1 SPK+
2 SPK-
TO SPEAKER
CN7601
C2105
OPEN
C2202
0.1
R2202
2.7
R2101
0Ω
R2102 0Ω
ND_H
PD_L
TO SYSCON
DOMCK
DOLRCK
DOBCK
TO DV DSP
R2103
0Ω
CLK_OUT
TO SYSCON
MIC SEL
SPK+
ND
SPK-
PD
MCLK
LRCK
BCLK
CCLK
Clock Divider
Control Register I/F
CS
DATA
R2104
0Ω
AUDIO_CS
DATA_OUT
TO SYSCON
R2105
0Ω
A/D Converter
HPF
D/A Converter
Audio I/F Controller
SDTI
SDTO
DODAT
AIDAT
TO DV DSP
C2101
10/6.3
GND (VD)
VD 3V
R2106
10
L2101
10μ
A_REG_3V
TO REG
A_MUTE
R2214
10k
HP OUT Lch
HP OUT Rch
R2401 82
R2402 82
R2403
82
HVDD 4.8V
C2401
10
/6.3
D2201
OPEN
HVCM 2.4V
C2214
1/16
LINE OUT Rch
C2216
1
R2208
1k
CN102
4 A_OUT/R
3 A_OUT/L
TO JACK
CN501
LINE IN Rch
C2213
0.1
BEEP
SIG
LINE OUT Lch
R2209
1k
C2217
1
LINE IN Lch
C2212
0.1
SP IN
D2202
OPEN
R2213
3.3k
A_MUTE
TO SYSCON
VOL
MIX
AVR OUT
Q2202
UMX1N
GND (VA)
VA 3V
LINE OUT2 Rch
LINE OUT2 Lch
C2210
0.015
C2207
1
C2208
1
R2203
18k
R2207
1k
C2211
0.033
C2209
0.1
C2103
10/6.3
R2205
0Ω
Q2401
2SC4617/QR/-X
REG_4.8V
R2404
1k
R2206
3.3k
R2204
100k
Q2201
2SC4617/QR/-X
C2402
10/6.3
TO REG
GND
S_SHUT
TO CAMERA DSP
S_MUTE
TO SYSCON
41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8

4.7 DV DSP SCHEMATIC DIAGRAM


01 MAIN (DV DSP)
CN105
TO JIG CONN.
SBE
FS_PLL
TO REG
A_REG_3V
REG_2.2V
REG_1.8V
GND
TO DECK CPU
ANA_PD
TO AUDIO
DOLRCK
DOBCK
DOMCK
AIDAT
DODAT
TO CAMERA DSP
DYI0
DYI1
DYI2
DYI3
DCI0
DCI1
DCI2
DCI3
OUTH
OUTV
DYO0
DYO1
DYO2
DYO3
DCO0
DCO1
DCO2
DCO3
INH
INV
TO TG/VDR
CLK27
IC3004 OPEN
IC3007 TC7SL00FU
IC3005 SN74AHC1G04K
L3001 NQR0129-001X
L3002 NQR0129-002X
L3005 NQR0129-002X
X3001
TL3005
TL3006
TL3007
TL3008
TL3010
TL3011
TL3012
IC3001
JCY0106-2
DECK_DSP
VDD
GND
PWMAUDO
VDDS
VCOAUDI
VCOAUDO
OSC32I
OSC32O
OSC44I
OSC44O
OSC48I
OSC48O
AUDIOTESTI
AUDIOTESTIO
DILRCK
DIBCK
DIMCK
DIDAT
AILRCK
AIBCK
AIMCK
PHYCLK
AIDAT[0]
AIDAT[1]
DOLRCK
DOBCK
DOMCK
DODAT
AOLRCK
AOBCK
AOMCK
AODAT[0]
AODAT[1]
YSO[0]
YSO[1]
YSO[2]
YSO[3]
BRSO[0]
BRSO[1]
BRSO[2]
BRSO[3]
YSI[0]
YSI[1]
YSI[2]
YSI[3]
BRSI[0]
BRSI[1]
BRSI[2]
BRSI[3]
OUTH
OUTV
INH
INV
OSC27I
OSC27O
RAMADRS[0]
RAMADRS[1]
RAMADRS[2]
RAMADRS[3]
RAMADRS[4]
RAMADRS[5]
RAMADRS[6]
RAMADRS[7]
RAMADRS[8]
RAMADRS[9]
RAMWE
RAMRAS
CAS0
RAMCAS[0]
RAMCAS[1]
RAMOE
RAMDATA[0]
RAMDATA[1]
RAMDATA[2]
RAMDATA[3]
RAMDATA[4]
RAMDATA[5]
RAMDATA[6]
RAMDATA[7]
RAMDATA[8]
RAMDATA[9]
RAMDATA[10]
RAMDATA[11]
RAMDATA[12]
RAMDATA[13]
RAMDATA[14]
RAMDATA[15]
XRESET
CPUALE
XCPUDSTB[0]
XCPUDSTB[1]
XCPURW
XCPUCS
XINT
RA0
RA1
RA2
RA3
RA4
RA5
RA6
RA7
RA8
RA9
RAMWE
RAMRAS
CAS1
OE
RD0
RD1
RD2
RD3
RD4
RD5
RD6
RD7
RD8
RD9
RD10
RD11
RD12
RD13
RD14
RD15
DV_RST
DALE
DRWSEL
DV_CS
DV_INT
DV_WAIT
OSC4185O
OSC4185I
GNDA
VCO4185
VCCA
RECCLK
SPA
RECCTL
RECDATA
TPNO[2]
TPNO[1]
TPNO[0]
PBCLK
PBDATA
HSP
HID
SBE
PF[1]
PF[0]
SERVOTRKREF
TRKREF
SERVOFRREF
FRREF
FRRES
CLK81SEL
VCO405O
VCO405I
PWM405O
EXTDATA[7]
EXTDATA[6]
EXTDATA[5]
EXTDATA[4]
EXTDATA[3]
EXTDATA[2]
EXTDATA[1]
EXTDATA[0]
EXWRITEFULL
EXREADEMPTY
EXRW
EXREQ
EXTCLKIN
REC_CTL
VCOAUD
PWMAUD
VDD1.8V
TSP
FRP
VCO405
PWM405
R3002 1M
R3005 OPEN
R3006 OPEN
R3007 0
R3008 10
R3030 6.8k
R3031 4.7k
R3047 OPEN
R3052 100
R3053 120K
R3054 330
R3055 OPEN
R3056 470
R3057 100
R3058 1M
R3059 100
R3060 1M
R3062 120K
R3032 0
C3001 OPEN
C3002 OPEN
C3003 10 6.3
C3004 10 6.3
C3005 OPEN
C3006 0.01
C3007 OPEN
C3009 10p
C3010 10p
C3011 0.1
C3012 0.1
C3022 0.1
C3023 0.1
C3035 0.1
C3037 0.1
C3038 0.01
C3040 0.1
C3041 0.01
C3042 0.47
C3049 0.1
C3050 0.1
1
2
3
4
5
A
B
C
D

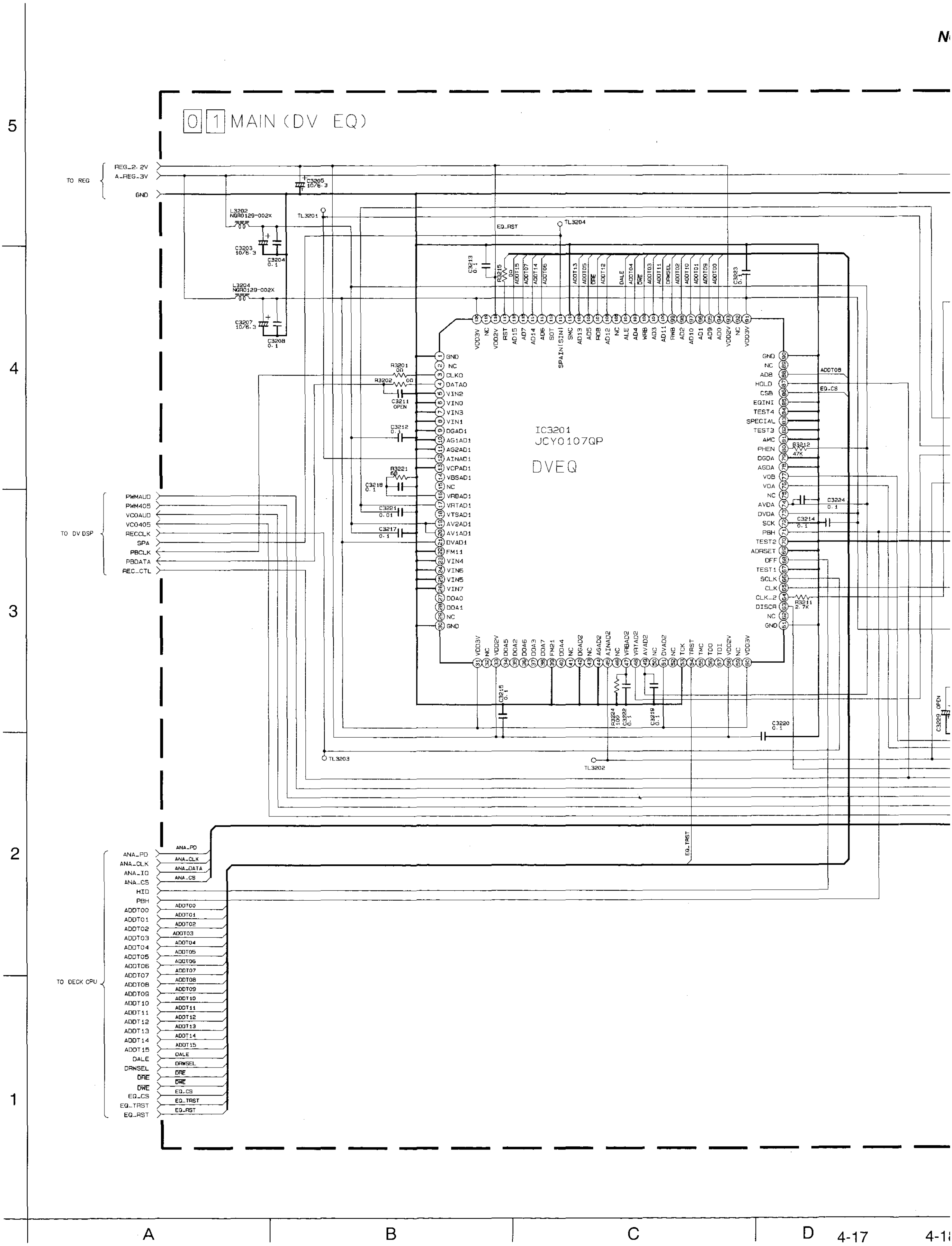
NOTES: ● ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***

● ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***



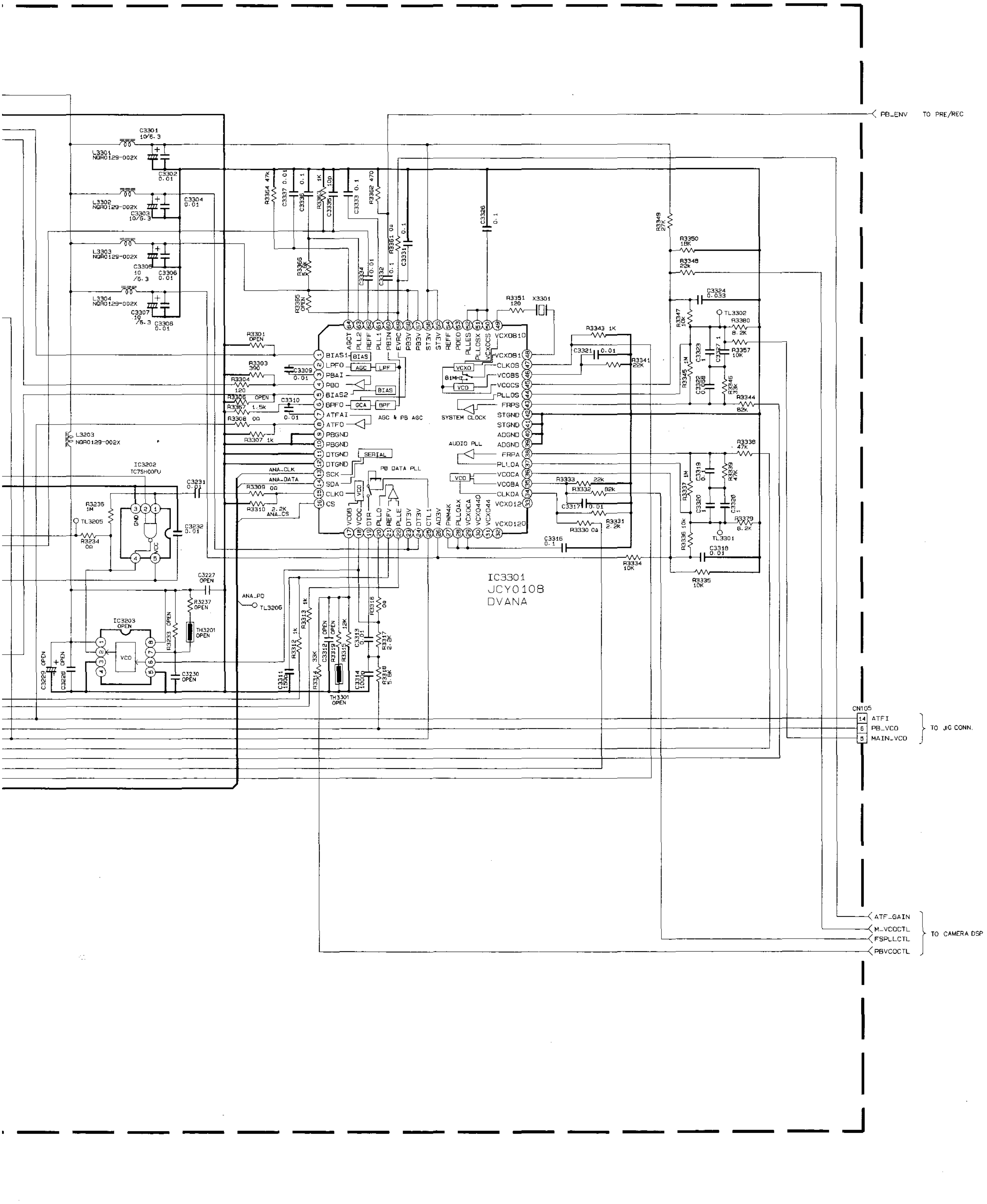
PWMAUD
PWM405
VCOAUD
VCO405
RECCLK
SPA
PBCLK
PBDATA
REC_CTL
HSE
TO DV EQ
TO DV EQ, PRE/REC
TO PRE/REC
HID
TSR
FRP
HID
TR
FR
TO DECK CPU
IC3101
PDI1394P11ABD
1394PHY
RESET
LPS
LREQ
VDD5V
DVDD
PD
DGND
SYSCLK
CTL0
CTL1
D0
D1
D2
D3
TPBIAS3
TPBIAS2
TPBIAS1
TPA1+
TPA1-
TPB1+
TPB1-
AGND
TPA2+
TPA2-
TPB2+
TPB2-
TPA3+
TPA3-
TPB3+
TPB3-
PLLVDD
XO
XI
AVDD
FILTER
PLLGND
ISO
R1
R0
DGND
TESTM2
TESTM1
CPS
PC2
PC1
PC0
CNA
C/LKON
R3101 330
R3102 10K
R3105 100K
R3106 470
R3103 100K
R3113 390K
R3115 4.7K
R3117 56
R3118 56
R3119 56
R3120 56
R3121 5.1K
R3128 5.1K
C3101 270p
C3102 1
C3103 1
C3104 1
C3105 0.1
C3106 10/6.3
C3107 10/6.3
C3108 0.1
C3109 0.1
L3101 0Ω
L3102 0Ω
L3103 NQR0384-003X
L3104 NQR0384-003X
CN102
TPA+
TPA-
TPB+
TPB-
GND
TO JACK CN501
EXWRITEFULL
EXREADEMPTY
EXRW
EXREQ
EXTCLKIN
VDD
GND
PHYLREQ
PHYCTL[0]
PHYCTL[1]
XPHYISO
LOCONT
SCLK
VDDS
PHYDATA[0]
PHYDATA[1]
PHYDATA[2]
PHYDATA[3]
TEST
TDO
TMS
TCK
TDI
TRST
SCANMODE
SCANENABLE
TESTIO[23]
TESTIO[0]
TL3004
C3026 0.1
C3027 0.1
CPUWAITH
CPUAD[15]
CPUAD[0]
XCPUDSTB[1]
XCPURW
XCPUCS
XINT
CPUWAIT
ADDT00
ADDT15
PHY_PD
PHY_CNA
PHY_RST
TO DECK CPU
L3004 NQR0129-002X
C3047 10/6.3
C3048 0.1
IC3002
M51V18165D50TSK
16M_DRAM
RAS
WE
UCAS
LCAS
OE
CAS1
CAS0
RA0
RA9
RD0
RD15
RAMRAS
RAMWE
DV_RST
DALE
DWE
DRE
DRWSEL
DV_CS
DV_INT
DV_WAIT
TO DECK CPU

4.8 DV EQ SCHEMATIC DIAGRAM


01 MAIN (DV EQ)
TO REG
REG_2.2V
A_REG_3V
GND
L3202 NQR0129-002X
C3203 10/6.3
C3204 0.1
C3205 10/6.3
L3204 NQR0129-002X
C3207 10/6.3
C3208 0.1
TL3201
TL3202
TL3203
TL3204
EQ_RST
C3213 0.1
R3215 0Ω
C3223 0.1
R3201 0Ω
R3202 0Ω
C3211 OPEN
C3212 0.1
R3221 68
C3218 0.1
C3221 0.01
C3217 0.1
C3215 0.1
R3224 100
C3222 0.1
C3219 0.1
C3220 0.1
C3224 0.1
C3214 0.1
R3212 47K
R3211 2.7K
C3229 OPEN
ADDT08
EQ_CS
IC3201
JCY0107QP
DVEQ
GND
NC
CLKO
DATAO
VIN2
VIN0
VIN3
VIN1
DGAD1
AG1AD1
AG2AD1
AINAD1
VCPAD1
VBSAD1
NC
VRBAD1
VRTAD1
VTSAD1
AV2AD1
AV1AD1
DVAD1
FM11
VIN4
VIN6
VIN5
VIN7
DOA0
DOA1
NC
GND
VDD3V
NC
VDD2V
DOA5
DOA2
DOA6
DOA3
DOA7
FM21
DOA4
NC
DGAD2
NC
AGAD2
AINAD2
NC
VRBAD2
VRTAD2
AVAD2
NC
DVAD2
NC
TCK
TRST
TMC
TDO
TDI
VDD2V
NC
VDD3V
GND
NC
AD8
HOLD
CSB
EQINI
TEST4
SPECIAL
TEST3
AMC
PHEN
DGDA
AGDA
VOB
VOA
NC
AVDA
DVDA
SCK
PBH
TEST2
ADRSET
OFF
TEST1
SCLK
CLK
CLK_2
DISCR
NC
GND
VDD3V
NC
VDD2V
RST
AD15
AD7
AD14
AD6
SOT
SPAIN(SIN)
SMC
AD13
AD5
RDB
AD12
NC
ALE
AD4
WRB
AD3
AD11
RWB
AD2
AD10
AD1
AD9
AD0
VDD2V
NC
VDD3V
ADDT15
ADDT07
ADDT14
ADDT06
ADDT13
ADDT05
DRE
ADDT12
DALE
ADDT04
DWE
ADDT03
ADDT11
DRWSEL
ADDT02
ADDT10
ADDT01
ADDT09
ADDT00
TO DV DSP
PWMAUD
PWM405
VCOAUD
VCO405
RECCLK
SPA
PBCLK
PBDATA
REC_CTL
TO DECK CPU
ANA_PD
ANA_CLK
ANA_DATA
ANA_IO
ANA_CS
HID
PBH
ADDT00
ADDT01
ADDT02
ADDT03
ADDT04
ADDT05
ADDT06
ADDT07
ADDT08
ADDT09
ADDT10
ADDT11
ADDT12
ADDT13
ADDT14
ADDT15
DALE
DRWSEL
DRE
DWE
EQ_CS
EQ_TRST
EQ_RST
5
4
3
2
1
A
B
C
D

NOTES: ● ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***

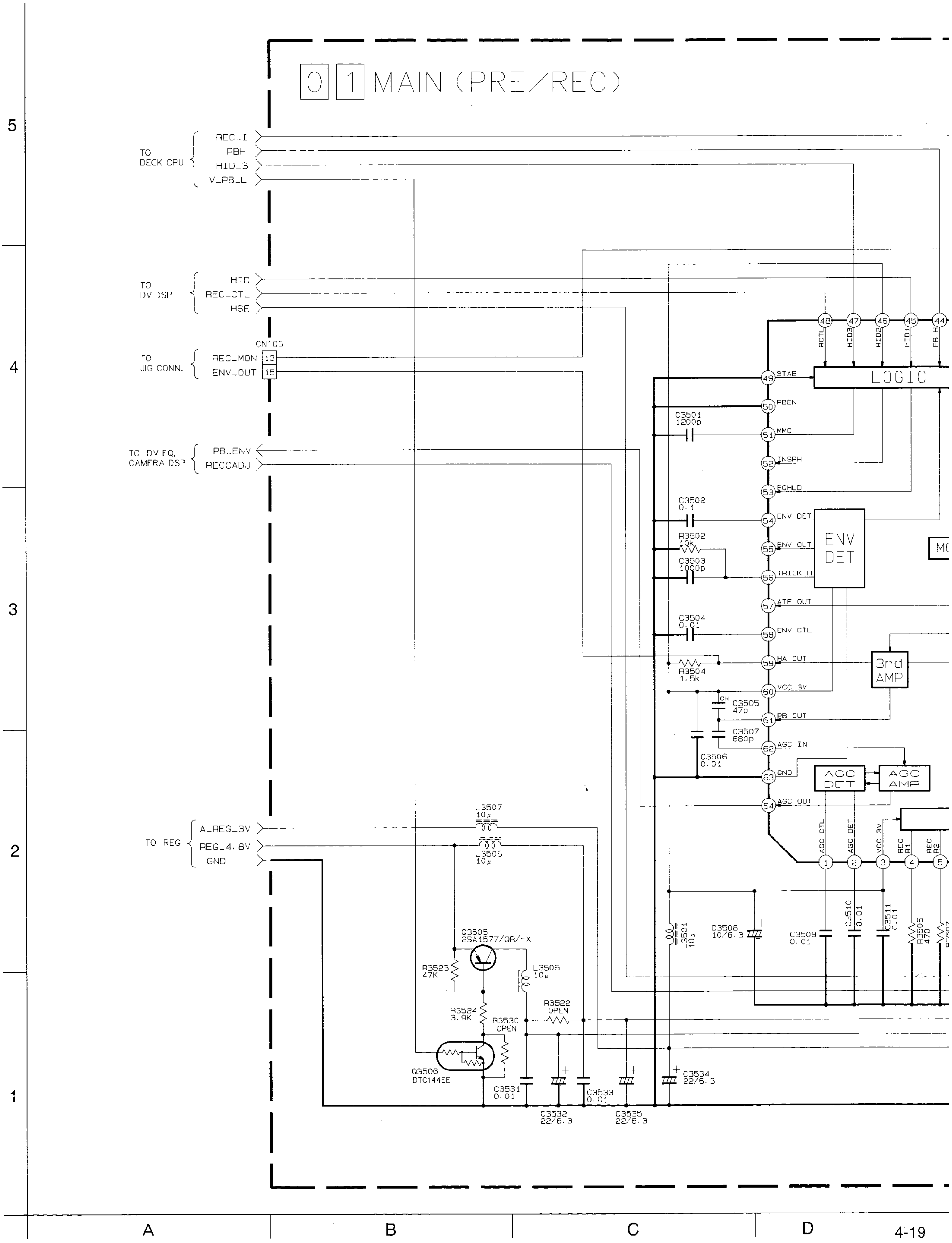
● ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***



IC3301
JCY0108
DVANA
IC3202
TC7SH00FU
IC3203
OPEN
VCO
X3301
L3301 NQR0129-002X
L3302 NQR0129-002X
L3303 NQR0129-002X
L3304 NQR0129-002X
L3203 NQR0129-002X
C3301 10/6.3
C3302 0.01
C3303 10/6.3
C3304 0.01
C3305 10 /6.3
C3306 0.01
C3307 10 /6.3
C3308 0.01
R3301 OPEN
R3303 390
R3304 120
R3305 OPEN
R3307 1k
R3308 0Ω
R3309 0Ω
R3310 2.2K
R3351 120
R3343 1K
R3341 22K
R3350 18K
R3348 22k
R3349 27K
R3344 82K
R3338 47K
R3334 10K
R3335 10K
TL3205
TL3206
TL3301
TL3302
TH3201 OPEN
TH3301 OPEN
BIAS1
LPFO
PBAI
PBO
BIAS2
BPFO
ATFAI
ATFO
PBGND
DTGND
SCK
SDA
CLKO
CS
VCXO81O
VCXO81I
CLKOS
VCOBS
VCOCS
PLLOS
FRPS
STGND
ADGND
FRPA
PLLOA
VCOCA
VCOBA
CLKOA
VCXO12I
VCXO12O
AGC
LPF
BIAS
GCA
BPF
VCXO
81MHz
VCO
AGC & PB AGC
SYSTEM CLOCK
AUDIO PLL
SERIAL
PB DATA PLL
ANA_CLK
ANA_DATA
ANA_CS
ANA_PO
PB_ENV
TO PRE/REC
CN105
14 ATFI
6 PB_VCO
5 MAIN_VCO
TO JIG CONN.
ATF_GAIN
M_VCOCTL
FSPLLCTL
PBVCOCTL
TO CAMERA DSP

4.9 PRE/REC SCHEMATIC DIAGRAM

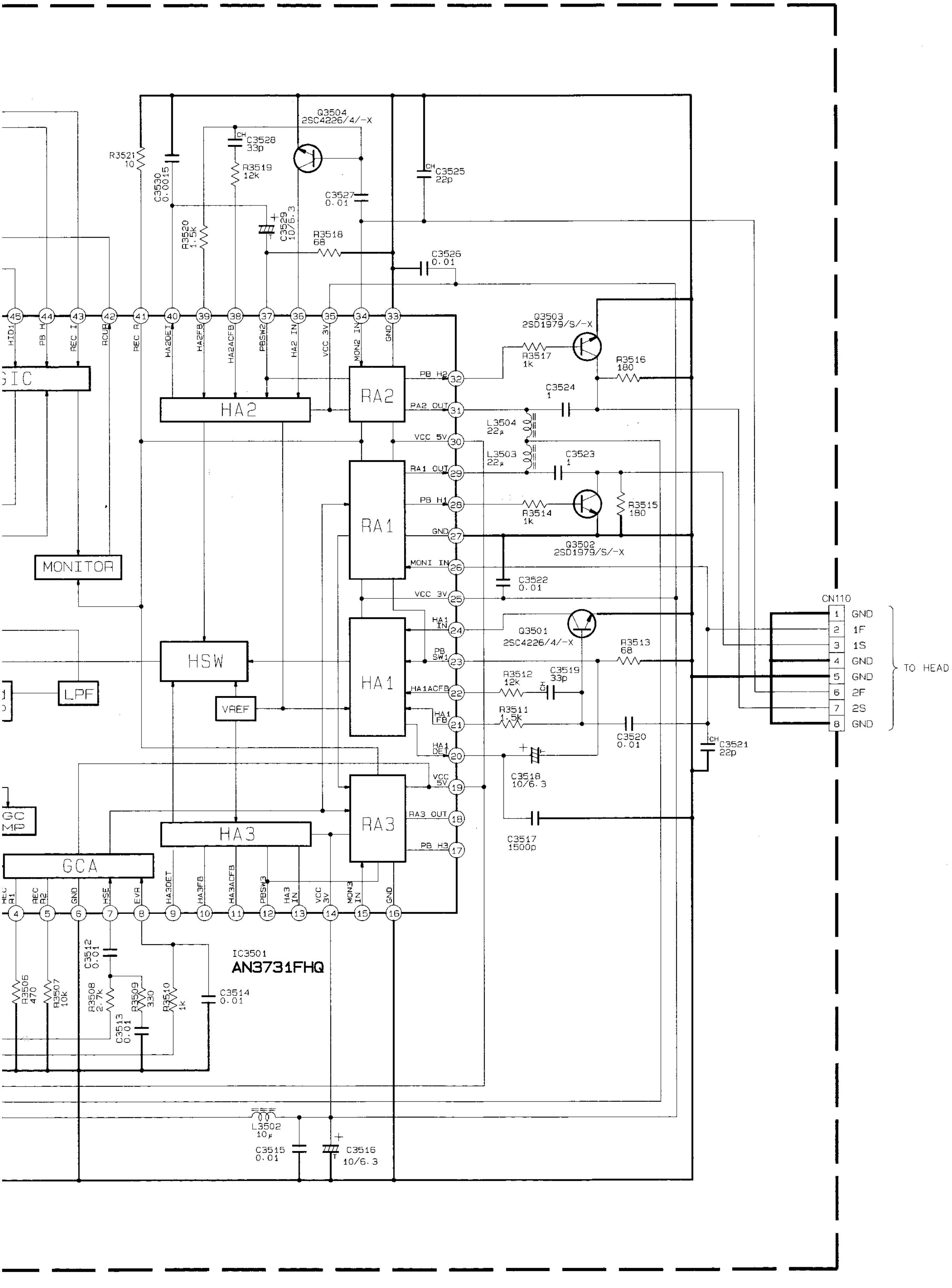
NOTES:



01 MAIN (PRE/REC)
TO DECK CPU
REC_I
PBH
HID_3
V_PB_L
TO DV DSP
HID
REC_CTL
HSE
TO JIG CONN.
CN105
REC_MON 13
ENV_OUT 15
TO DV EQ, CAMERA DSP
PB_ENV
RECCADJ
TO REG
A_REG_3V
REG_4.8V
GND
RCTL
HID3
HID2
HID1
PB H
LOGIC
STAB
PBEN
MMC
INSRH
EQHLD
ENV DET
ENV OUT
TRICK H
ATF OUT
ENV CTL
HA OUT
VCC 3V
PB OUT
AGC IN
GND
AGC OUT
ENV DET
3rd AMP
AGC DET
AGC AMP
AGC CTL
AGC DET
VCC 3V
REC R1
REC R2
C3501 1200p
C3502 0.1
R3502 10K
C3503 1000p
C3504 0.01
R3504 1.5K
C3505 47p
CH
C3507 680p
C3506 0.01
L3507 10μ
L3506 10μ
L3501 10μ
C3508 10/6.3
C3509 0.01
C3510 0.01
C3511 0.01
R3506 470
Q3505 2SA1577/QR/-X
R3523 47K
L3505 10μ
R3524 3.9K
R3530 OPEN
R3522 OPEN
Q3506 DTC144EE
C3531 0.01
C3532 22/6.3
C3533 0.01
C3535 22/6.3
C3534 22/6.3
5
4
3
2
1
A
B
C
D

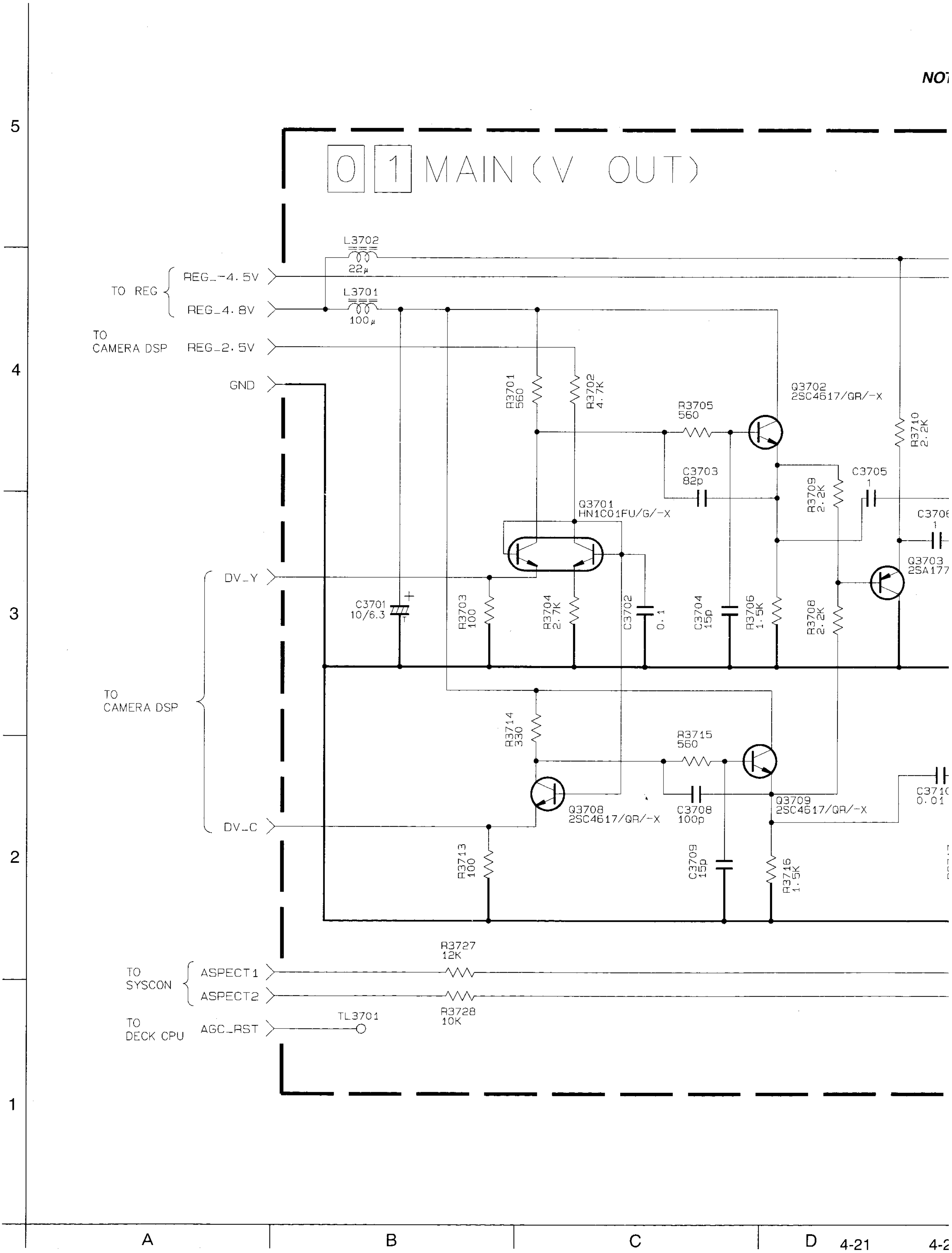
OTES: • For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".

• When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



Q3504
2SC4226/4/-X
R3521 10
C3530 0.0015
C3528 33p
R3519 12k
C3529 10/6.3
R3520 1.5k
R3518 68
C3527 0.01
C3525 22p
C3526 0.01
HID1
PB H
REC I
RCUR
REC R
HA2DET
HA2FB
HA2ACFB
PBSW2
HA2 IN
VCC 3V
MON2 IN
GND
IC
HA2
RA2
RA1
HA1
RA3
HA3
HSW
VREF
LPF
MONITOR
GCA
Q3503
2SD1979/S/-X
R3517 1k
R3516 180
C3524 1
L3504 22μ
L3503 22μ
C3523 1
R3514 1k
R3515 180
Q3502
2SD1979/S/-X
C3522 0.01
Q3501
2SC4226/4/-X
R3513 68
R3512 12k
C3519 33p
R3511 1.5k
C3520 0.01
C3521 22p
C3518 10/6.3
C3517 1500p
PB H2
PA2 OUT
VCC 5V
RA1 OUT
PB H1
GND
MONI IN
VCC 3V
HA1 IN
PB SW1
HA1ACFB
HA1 FB
HA1 DET
VCC 5V
RA3 OUT
PB H3
REC R1
REC R2
GND
HSE
EVR
HA3DET
HA3FB
HA3ACFB
PBSW3
HA3 IN
VCC 3V
MON3 IN
GND
C3512 0.01
R3506 470
R3507 10k
R3508 2.7k
R3509 330
R3510 1k
C3513 0.01
C3514 0.01
IC3501
AN3731FHQ
L3502 10μ
C3515 0.01
C3516 10/6.3
CN110
1 GND
2 1F
3 1S
4 GND
5 GND
6 2F
7 2S
8 GND
TO HEAD

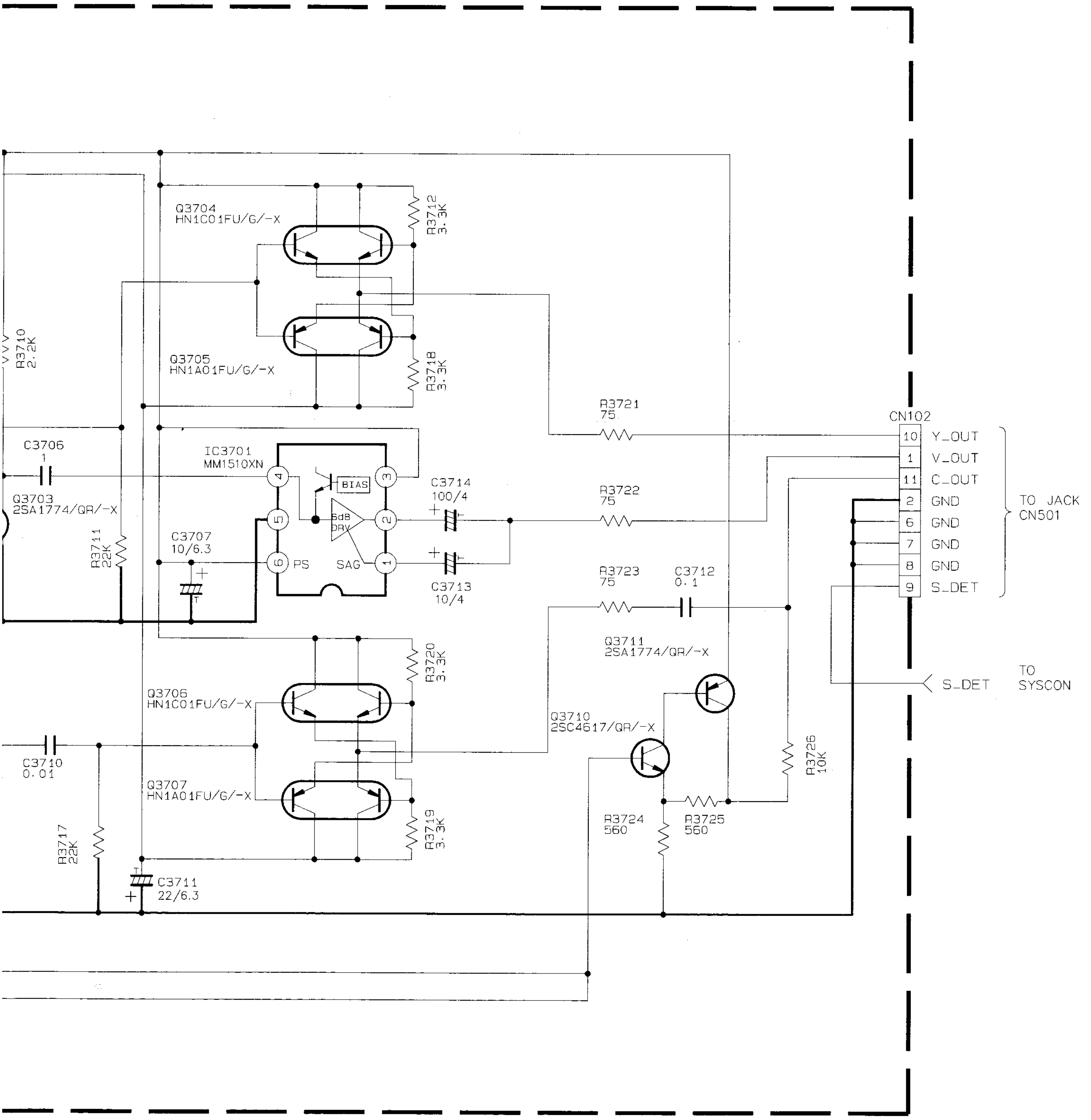
4.10 V OUT SCHEMATIC DIAGRAM



NOT
01 MAIN (V OUT)
TO REG
REG_-4.5V
REG_4.8V
TO CAMERA DSP
REG_2.5V
GND
DV_Y
TO CAMERA DSP
DV_C
TO SYSCON
ASPECT1
ASPECT2
TO DECK CPU
AGC_RST
L3702 22μ
L3701 100μ
C3701 10/6.3
R3701 560
R3702 4.7K
R3703 100
R3704 2.7K
R3705 560
C3702 0.1
C3703 82p
C3704 15p
R3706 1.5K
Q3701 HN1C01FU/G/-X
Q3702 2SC4617/QR/-X
R3709 2.2K
R3708 2.2K
R3710 2.2K
C3705 1
C3706 1
Q3703 2SA177
R3714 330
R3715 560
Q3708 2SC4617/QR/-X
C3708 100p
Q3709 2SC4617/QR/-X
C3709 15p
R3716 1.5K
R3713 100
C3710 0.01
R3727 12K
R3728 10K
TL3701
5
4
3
2
1
A
B
C
D

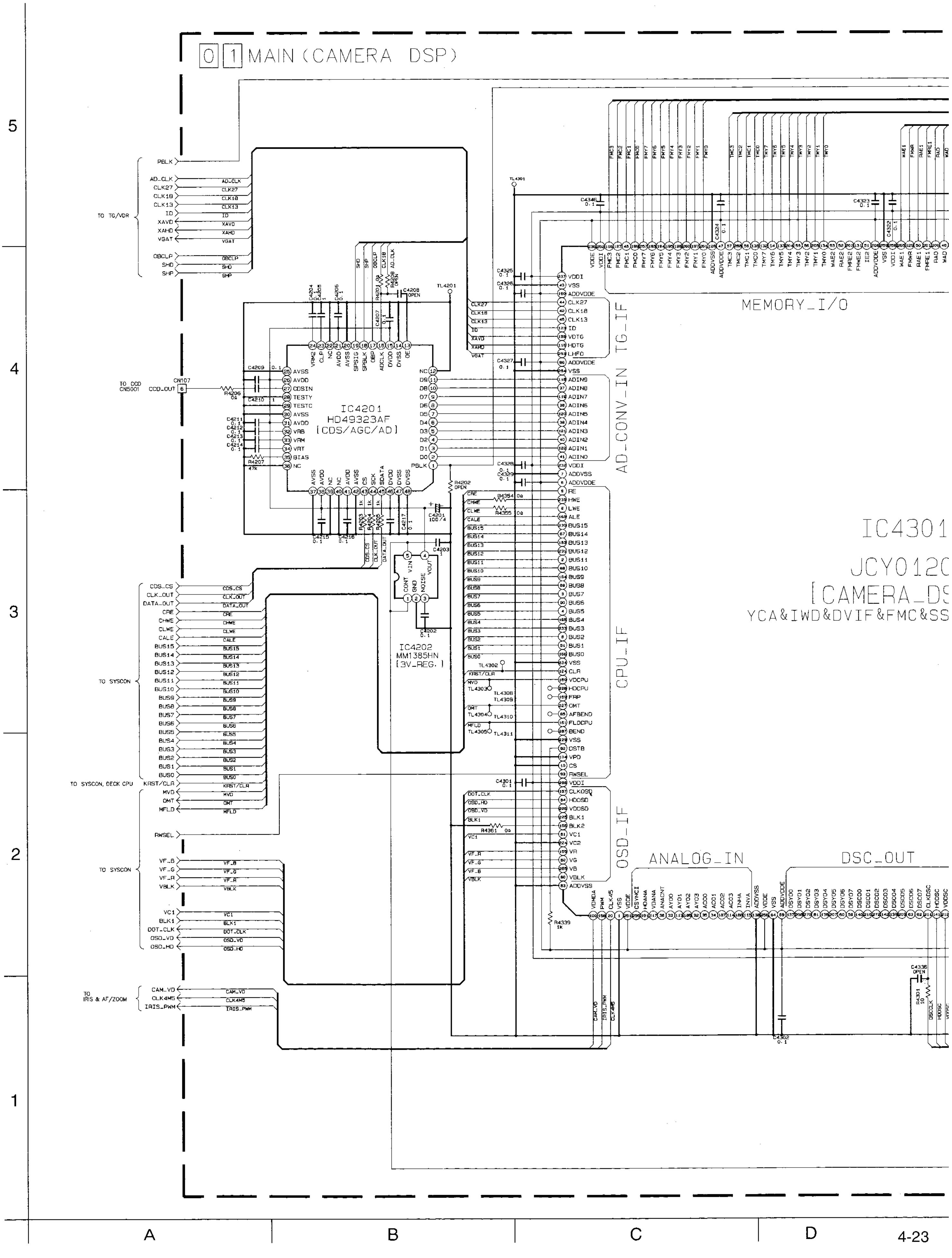
NOTES: ***● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***

● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



Q3704
HN1C01FU/G/-X
R3712
3.3K
Q3705
HN1A01FU/G/-X
R3718
3.3K
R3710
2.2K
C3706
1
IC3701
MM1510XN
BIAS
6dB
DRV
PS
SAG
C3714
100/4
C3713
10/4
C3707
10/6.3
Q3703
2SA1774/QR/-X
R3711
22K
R3721
75
R3722
75
R3723
75
C3712
0.1
CN102
10 Y_OUT
1 V_OUT
11 C_OUT
2 GND
6 GND
7 GND
8 GND
9 S_DET
TO JACK
CN501
S_DET
TO
SYSCON
Q3711
2SA1774/QR/-X
Q3710
2SC4617/QR/-X
R3726
10K
R3724
560
R3725
560
Q3706
HN1C01FU/G/-X
Q3707
HN1A01FU/G/-X
R3720
3.3K
R3719
3.3K
C3710
0.01
R3717
22K
C3711
22/6.3

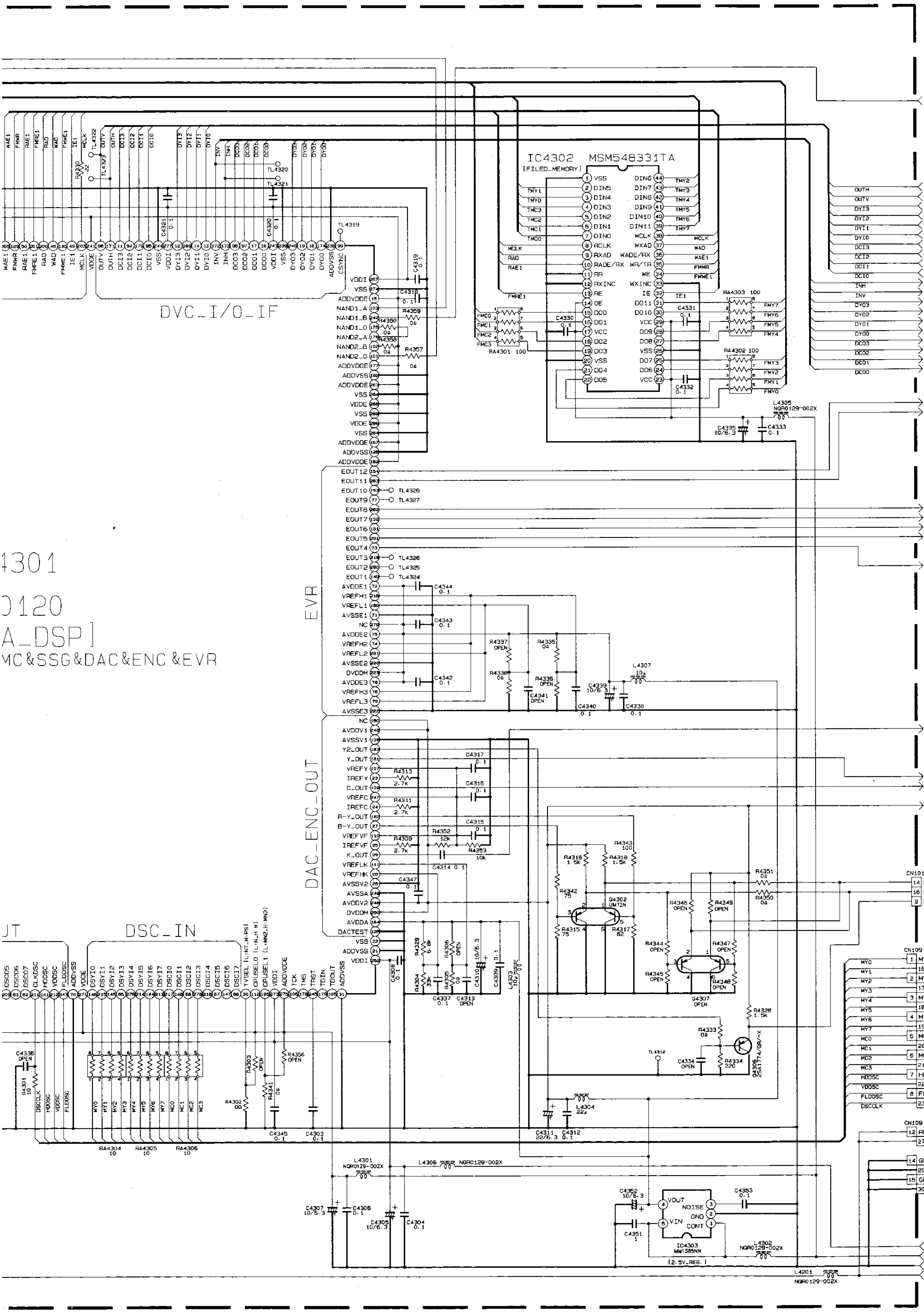
4.11 CAMERA DSP SCHEMATIC DIAGRAM



01 MAIN (CAMERA DSP)
TO TG/VDR
PBLK
AD_CLK
CLK27
CLK18
CLK13
ID
XAVD
XAHD
VGAT
OBCLP
SHD
SHP
TO CCD CN5001
CN107
CCD_OUT
R4206 0Ω
R4207 47K
TL4201
TL4301
IC4201
HD49323AF
[CDS/AGC/AD]
IC4202
MM1385HN
[3V_REG.]
VIN
VOUT
CONT
GND
NOISE
C4201 100/4
C4202 0.1
C4203 1
R4202 OPEN
C4208 OPEN
TO SYSCON
CDS_CS
CLK_OUT
DATA_OUT
CRE
CHWE
CLWE
CALE
BUS15
BUS14
BUS13
BUS12
BUS11
BUS10
BUS9
BUS8
BUS7
BUS6
BUS5
BUS4
BUS3
BUS2
BUS1
BUS0
TO SYSCON, DECK CPU
KRST/CLR
MVD
OMT
MFLD
RWSEL
TO SYSCON
VF_B
VF_G
VF_R
VBLK
VC1
BLK1
DOT_CLK
OSD_VD
OSD_HD
TO IRIS & AF/ZOOM
CAM_VD
CLK4M5
IRIS_PWM
R4354 0Ω
R4355 0Ω
R4361 0Ω
R4339 1K
TL4302
TL4303
TL4304
TL4305
TL4308
TL4309
TL4310
TL4311
C4302 0.1
C4336 OPEN
R4301 10
MEMORY_I/O
TG_IF
AD_CONV_IN
CPU_IF
OSD_IF
ANALOG_IN
DSC_OUT
IC4301
JCY0120
[CAMERA_DS
YCA&IWD&DVIF&FMC&SS
VDDI
VSS
ADDVDDE
LHFO
VDTG
HDTG
ADIN9
ADIN8
ADIN7
ADIN6
ADIN5
ADIN4
ADIN3
ADIN2
ADIN1
ADIN0
ADDVSS
RE
HWE
LWE
ALE
CLR
VDCPU
HDCPU
FRP
AFBEND
FLDCPU
BEND
DSTB
VPD
CS
CLKOSD
HDOSD
VDOSD
BLK2
VC2
VR
VG
VB
A
B
C
D
1
2
3
4
5

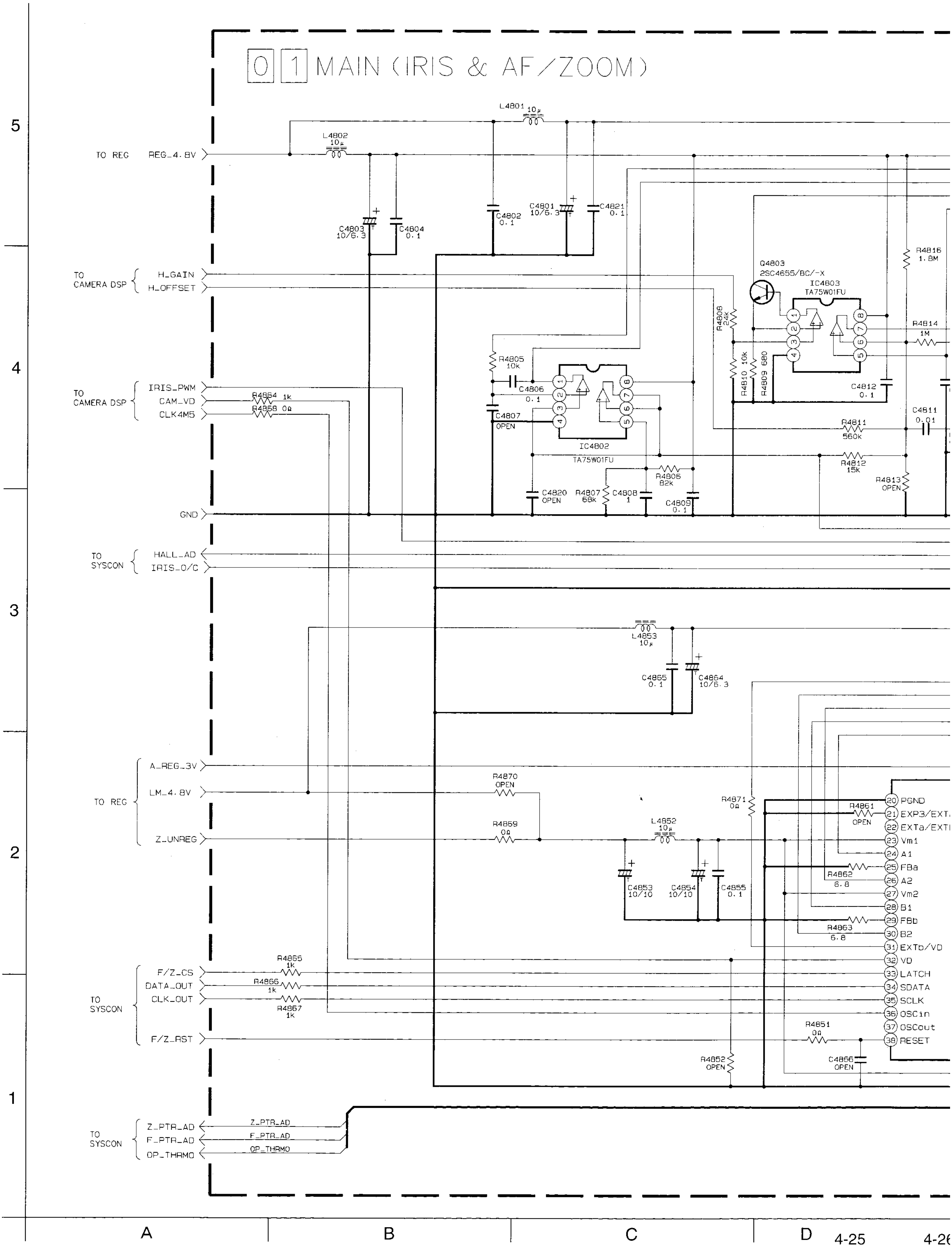
NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*

● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*


IC4302 MSM548331TA
[FILED_MEMORY]
DVC_I/O_IF
EVR
DAC_ENC_OUT
DSC_IN
4301
0120
A_DSP]
MC&SSG&DAC&ENC&EVR
CCD_KIZU TO SYSCON
OUTH
OUTV
DYI3
DYI2
DYI1
DYI0
DCI3
DCI2
DCI1
DCI0
INH
INV
DYO3
DYO2
DYO1
DYO0
DCO3
DCO2
DCO1
DCO0
TO DV DSP
H_OFFSET
H_GAIN
TO IRIS & AF/ZOOM
PBVCOCTL
FSPLLCTL
M_VCOCTL
ATF_GAIN
TO DVEQ
RECCADJ
TO PRE/REC
S_SHUT
TO AUDIO
DV_Y
DV_C
REG_2.5V
TO V OUT
CN101
LCD_R-Y
LCD_B-Y
LCD_Y
TO MONITOR CN7601
CN109
MY0
MY1
MY2
MY3
MY4
MY5
MY6
MY7
MC0
MC1
MC2
MC3
HDDSC
VDDSC
FLDDSC
DSCCLK
(OPEN)
REG_4.8V
GND
(OPEN)
REG_1.8V
A_REG_3V
GND
REG_4.8V
TO REG
IC4303 MM1385NN
[2.5V_REG.]
VOUT
NOISE
GND
VIN
CONT
Q4302 UMT2N
Q4307 OPEN
Q4306 2SA1774/QR/-X
L4301 NQR0129-002X
L4306 NQR0129-002X
L4302 NQR0129-002X
L4201 NQR0129-002X
L4305 NQR0129-002X
L4307 10µ
L4304 22µ
L4303 10µ
RA4301 100
RA4302 100
RA4303 100
RA4304 10
RA4305 10
RA4306 10

4.12 IRIS & AF/ZOOM SCHEMATIC DIAGRAM

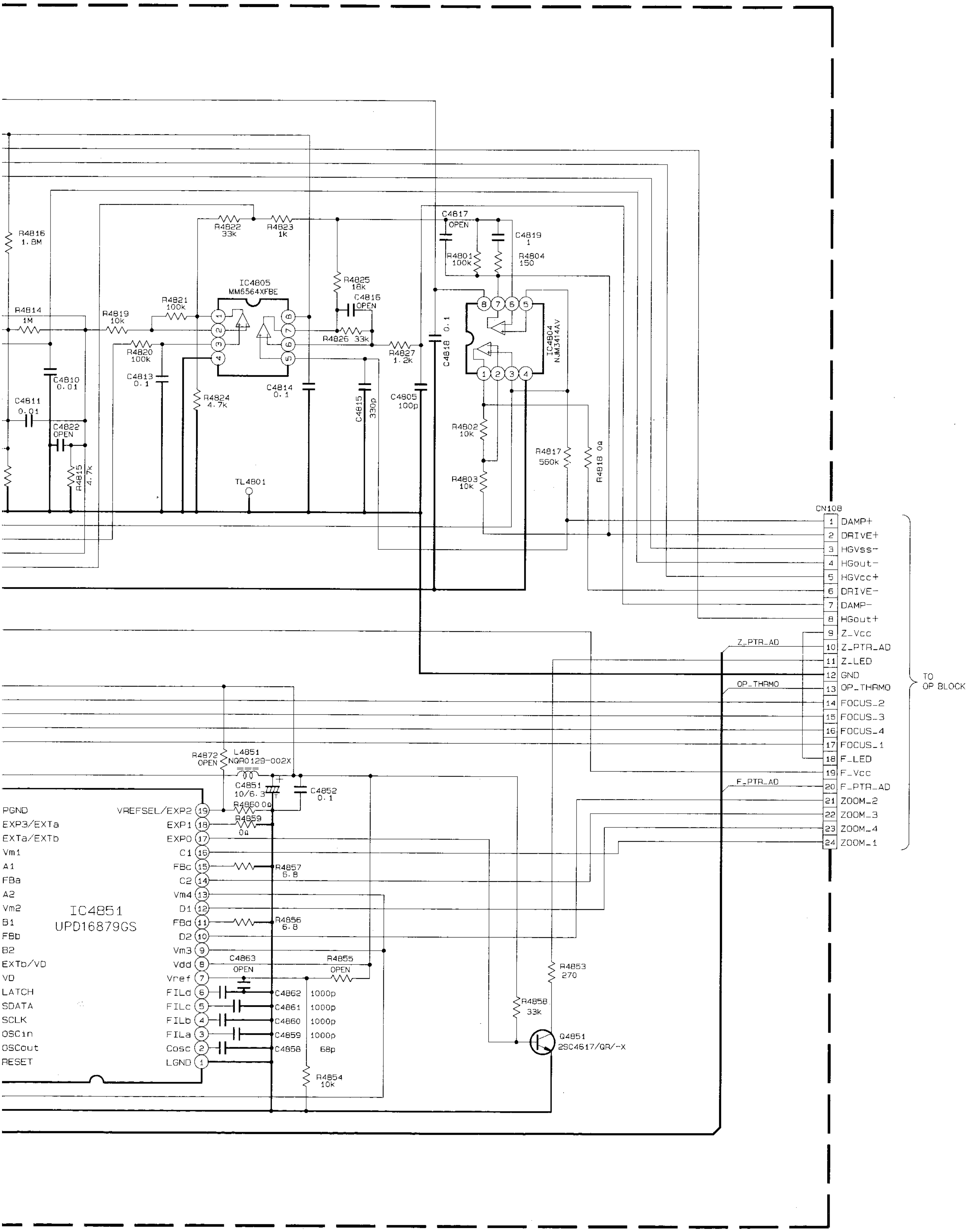
NOT



01 MAIN (IRIS & AF/ZOOM)
5
4
3
2
1
A
B
C
D
TO REG
REG_4.8V
L4801 10μ
L4802 10μ
C4803 10/6.3
C4804 0.1
C4802 0.1
C4801 10/6.3
C4821 0.1
TO CAMERA DSP
H_GAIN
H_OFFSET
R4816 1.8M
Q4803 2SC4655/BC/-X
IC4803 TA75W01FU
R4808 24k
R4814 1M
R4810 10k
R4809 680
C4812 0.1
R4805 10k
C4806 0.1
C4807 OPEN
IC4802 TA75W01FU
TO CAMERA DSP
IRIS_PWM
CAM_VD
CLK4M5
R4864 1k
R4858 0Ω
C4811 0.01
R4811 560k
R4812 15k
R4813 OPEN
C4820 OPEN
R4807 68k
C4808 1
R4806 82k
C4809 0.1
GND
TO SYSCON
HALL_AD
IRIS_O/C
L4853 10μ
C4865 0.1
C4864 10/6.3
TO REG
A_REG_3V
LM_4.8V
Z_UNREG
R4870 OPEN
R4869 0Ω
R4871 0Ω
L4852 10μ
C4853 10/10
C4854 10/10
C4855 0.1
R4861 OPEN
R4862 6.8
R4863 6.8
20 PGND
21 EXP3/EXT
22 EXTa/EXT
23 Vm1
24 A1
25 FBa
26 A2
27 Vm2
28 B1
29 FBb
30 B2
31 EXTb/VD
32 VD
33 LATCH
34 SDATA
35 SCLK
36 OSCin
37 OSCout
38 RESET
TO SYSCON
F/Z_CS
DATA_OUT
CLK_OUT
F/Z_RST
R4865 1k
R4866 1k
R4867 1k
R4851 0Ω
R4852 OPEN
C4866 OPEN
TO SYSCON
Z_PTR_AD
F_PTR_AD
OP_THRMO

NOTES: ● ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***

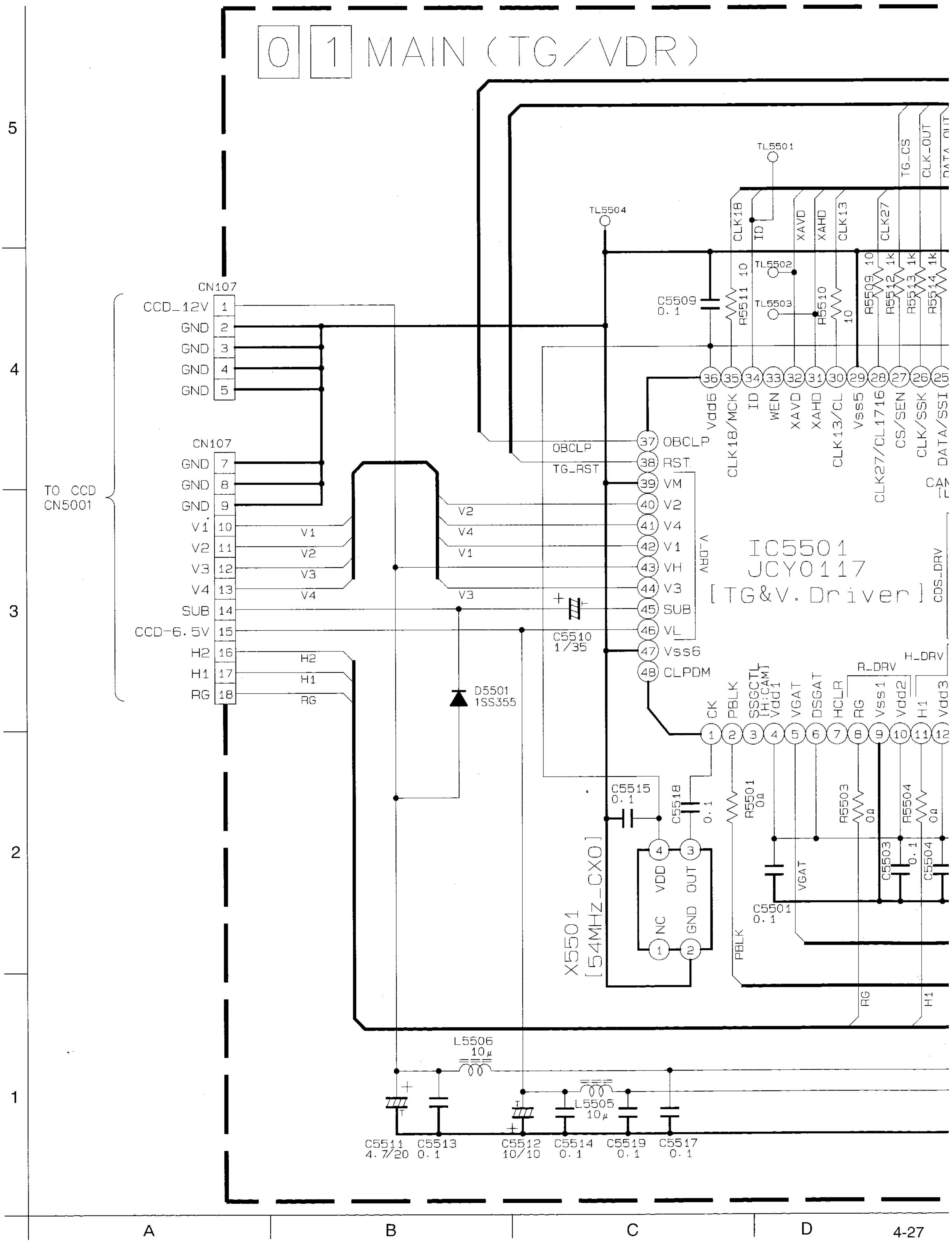
● ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***



R4816
1.8M
R4814
1M
R4819
10k
R4821
100k
R4820
100k
R4822
33k
R4823
1k
IC4805
MM6564XFBE
R4825
18k
C4816
OPEN
R4826 33k
R4827
1.2k
C4810
0.01
C4811
0.01
C4822
OPEN
R4815
4.7k
C4813
0.1
R4824
4.7k
C4814
0.1
C4815
330p
C4805
100p
TL4801
C4817
OPEN
C4819
1
R4801
100k
R4804
150
C4818 0.1
IC4804
NJM3414AV
R4802
10k
R4803
10k
R4817
560k
R4818 0Ω
CN108
1 DAMP+
2 DRIVE+
3 HGVss-
4 HGout-
5 HGVcc+
6 DRIVE-
7 DAMP-
8 HGout+
9 Z_Vcc
10 Z_PTR_AD
11 Z_LED
12 GND
13 OP_THRMO
14 FOCUS_2
15 FOCUS_3
16 FOCUS_4
17 FOCUS_1
18 F_LED
19 F_Vcc
20 F_PTR_AD
21 ZOOM_2
22 ZOOM_3
23 ZOOM_4
24 ZOOM_1
TO
OP BLOCK
Z_PTR_AD
OP_THRMO
F_PTR_AD
R4872
OPEN
L4851
NQR0129-002X
C4851
10/6.3
C4852
0.1
R4860 0Ω
R4859
0Ω
PGND
EXP3/EXTa
EXTa/EXTb
Vm1
A1
FBa
A2
Vm2
B1
FBb
B2
EXTb/VD
VD
LATCH
SDATA
SCLK
OSCin
OSCout
RESET
IC4851
UPD16879GS
VREFSEL/EXP2 19
EXP1 18
EXP0 17
C1 16
FBc 15
C2 14
Vm4 13
D1 12
FBd 11
D2 10
Vm3 9
Vdd 8
Vref 7
FILd 6
FILc 5
FILb 4
FILa 3
Cosc 2
LGND 1
R4857
6.8
R4856
6.8
C4863
OPEN
R4855
OPEN
C4862 1000p
C4861 1000p
C4860 1000p
C4859 1000p
C4858 68p
R4854
10k
R4853
270
R4858
33k
Q4851
2SC4617/QR/-X

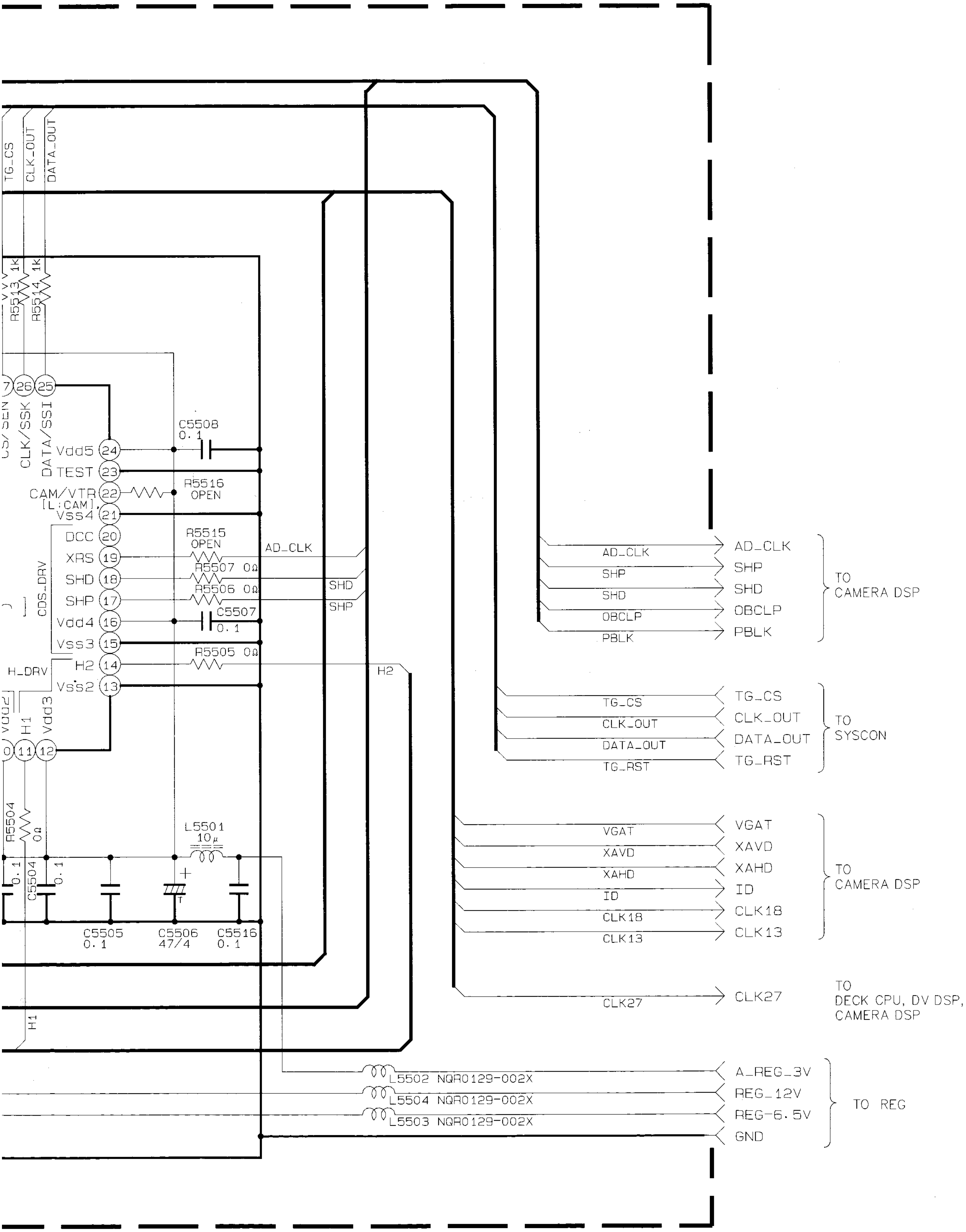
4.13 TG/VDR SCHEMATIC DIAGRAM

NOTES: ***● For th***
this d
● When



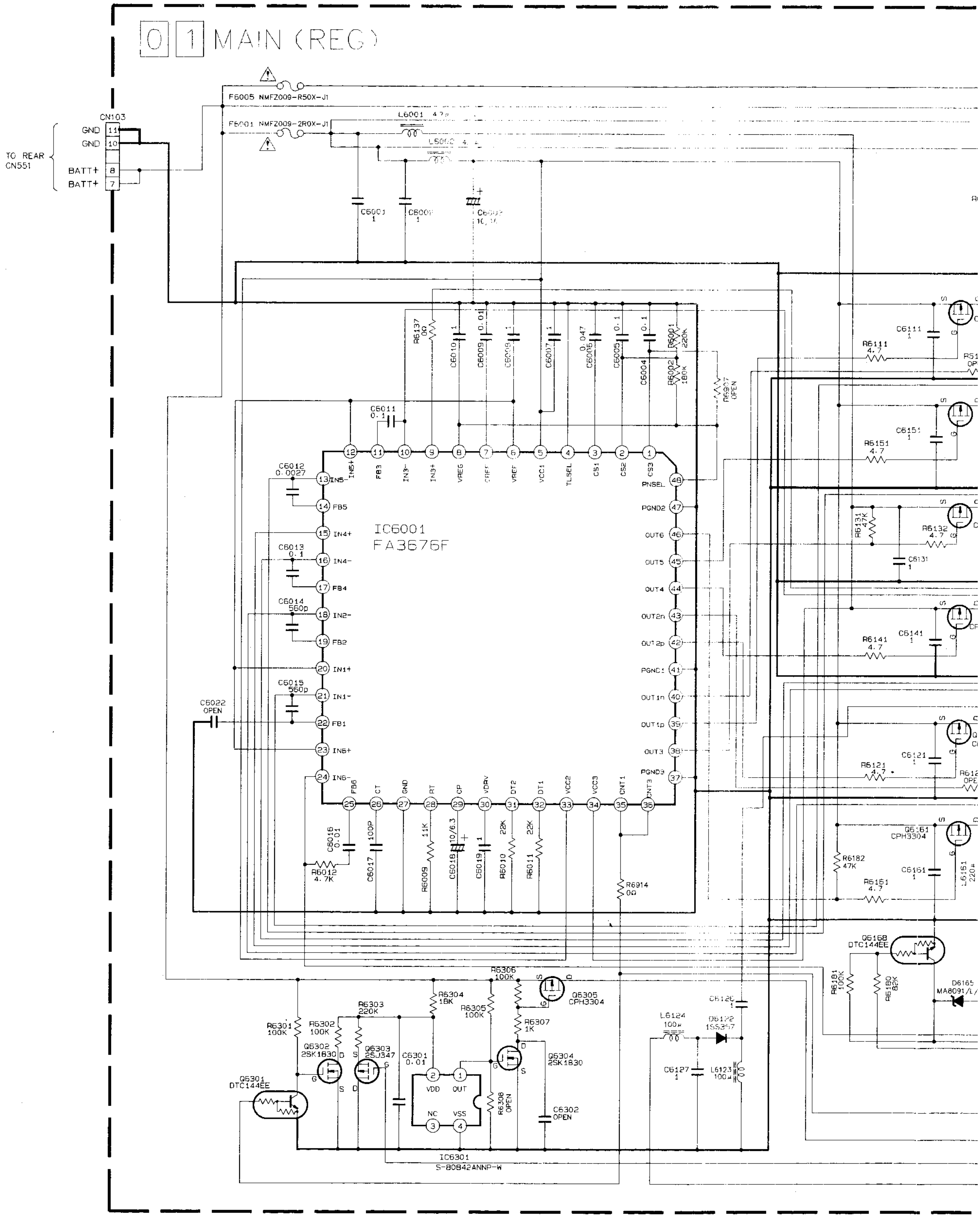
0 1 MAIN (TG/VDR)
5
4
3
2
1
A
B
C
D
TO CCD
CN5001
CN107
CCD_12V 1
GND 2
GND 3
GND 4
GND 5
CN107
GND 7
GND 8
GND 9
V1 10
V2 11
V3 12
V4 13
SUB 14
CCD-6.5V 15
H2 16
H1 17
RG 18
V1
V2
V3
V4
V2
V4
V1
V3
H2
H1
RG
OBCLP
TG_RST
TL5501
TL5502
TL5503
TL5504
C5509
0.1
R5511 10
R5510 10
R5509 10
R5512 1k
R5513 1k
R5514 1k
CLK18
ID
XAVD
XAHD
CLK13
CLK27
TG_CS
CLK_OUT
DATA_OUT
36 Vdd6
35 CLK18/MCK
34 ID
33 WEN
32 XAVD
31 XAHD
30 CLK13/CL
29 Vss5
28 CLK27/CL1716
27 CS/SEN
26 CLK/SSK
25 DATA/SSI
37 OBCLP
38 RST
39 VM
40 V2
41 V4
42 V1
43 VH
44 V3
45 SUB
46 VL
47 Vss6
48 CLPDM
V_DRV
IC5501
JCY0117
[TG&V.Driver]
CDS_DRV
CAM
H_DRV
R_DRV
1 CK
2 PBLK
3 SSGCTL [H:CAM]
4 Vdd1
5 VGAT
6 DSGAT
7 HCLR
8 RG
9 Vss1
10 Vdd2
11 H1
12 Vdd3
C5510
1/35
D5501
1SS355
C5515
0.1
C5518
0.1
X5501
[54MHz_CXO]
4 VDD
3 OUT
1 NC
2 GND
R5501
0Ω
R5503
0Ω
R5504
0Ω
C5501
0.1
C5503
0.1
C5504
VGAT
PBLK
RG
H1
L5506
10μ
L5505
10μ
C5511
4.7/20
C5513
0.1
C5512
10/10
C5514
0.1
C5519
0.1
C5517
0.1

- ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***
- ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***


TG_CS
CLK_OUT
DATA_OUT
R5513 1K
R5514 1K
26
25
CLK/SSK
DATA/SSI
Vdd5 24
TEST 23
CAM/VTR 22
[L:CAM]
Vss4 21
DCC 20
XRS 19
SHD 18
SHP 17
Vdd4 16
Vss3 15
H2 14
Vss2 13
CDS_DRV
H_DRV
H1 11
Vdd3 12
C5508 0.1
R5516 OPEN
R5515 OPEN
AD_CLK
R5507 0Ω
SHD
R5506 0Ω
SHP
C5507 0.1
R5505 0Ω
H2
R5504 0Ω
C5504 0.1
0.1
L5501 10μ
C5505 0.1
C5506 47/4
C5516 0.1
H1
AD_CLK
SHP
SHD
OBCLP
PBLK
TO CAMERA DSP
TG_CS
CLK_OUT
DATA_OUT
TG_RST
TO SYSCON
VGAT
XAVD
XAHD
ID
CLK18
CLK13
TO CAMERA DSP
CLK27
TO DECK CPU, DV DSP, CAMERA DSP
L5502 NQR0129-002X
L5504 NQR0129-002X
L5503 NQR0129-002X
A_REG_3V
REG_12V
REG-6.5V
GND
TO REG

4.14 REGULATOR SCHEMATIC DIAGRAM

NOTES: ***● For the des***
this diagra
● When orde



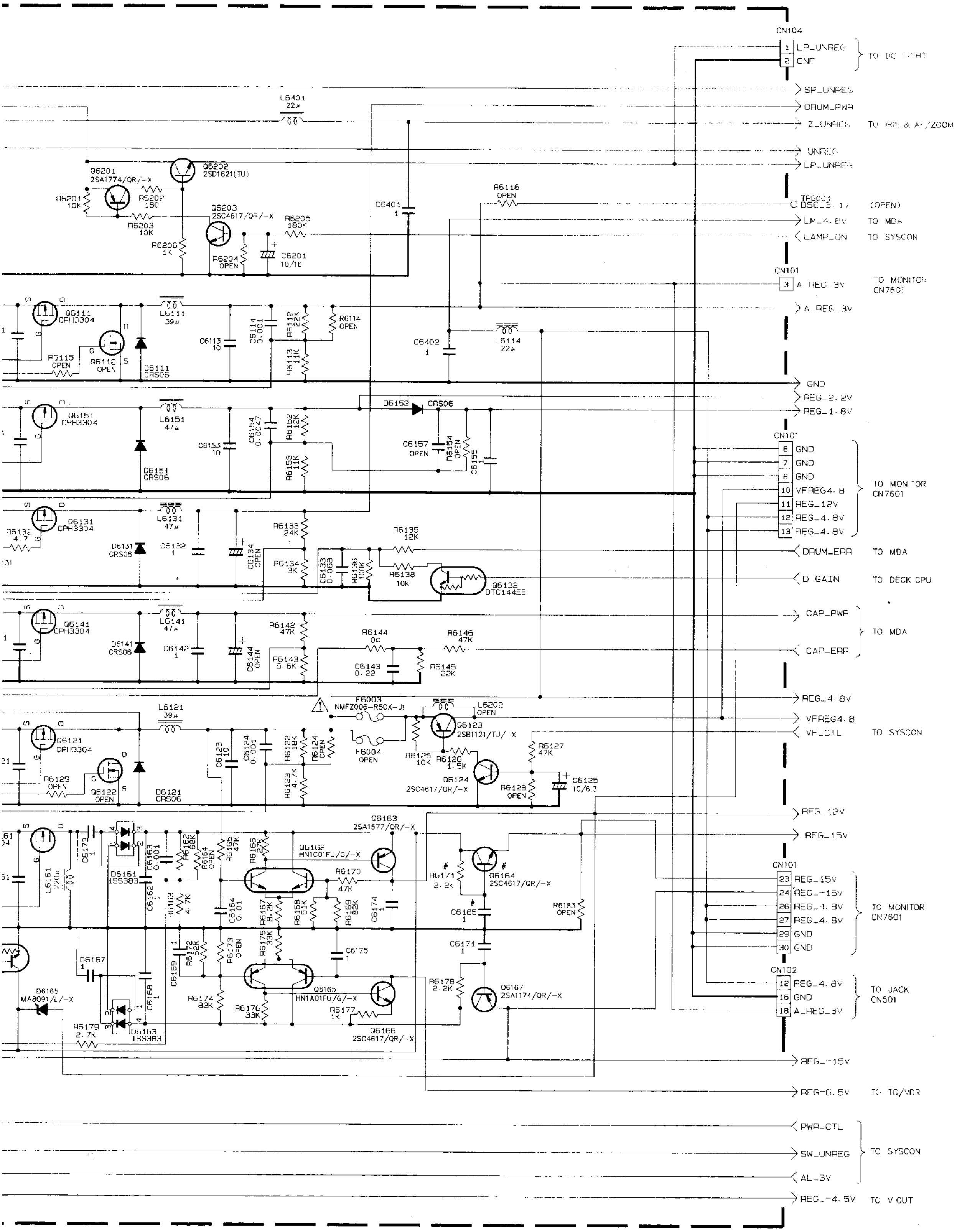
01 MAIN (REG)
CN103
GND 11
GND 10
BATT+ 8
BATT+ 7
TO REAR CN551
F6005 NMFZ009-R50X-J1
F6001 NMFZ009-2R0X-J1
L6001 4.7µ
L6002 4.7µ
C6001 1
C6002 1
C6003 10/16
IC6001
FA3676F
R6137 0Ω
C6010 1
C6009 0.01
C6008 1
C6007 1
C6006 0.047
C6005 0.1
C6004 0.1
R6001 220K
R6002 180K
R6937 OPEN
C6011 0.1
C6012 0.0027
C6013 0.1
C6014 560p
C6015 560p
C6022 OPEN
IN5+
FB3
IN3-
IN3+
VREG
CREF
VREF
VCC1
TLSEL
CS1
CS2
CS3
IN5-
FB5
IN4+
IN4-
FB4
IN2-
FB2
IN1+
IN1-
FB1
IN6+
IN6-
PNSEL
PGND2
OUT6
OUT5
OUT4
OUT2n
OUT2p
PGND1
OUT1n
OUT1p
OUT3
PGND3
FB6
CT
GND
RT
CP
VDRV
DT2
DT1
VCC2
VCC3
CNT1
CNT3
C6016 0.01
C6017 100P
R6009 11K
C6018 10/6.3
C6019 1
R6010 22K
R6011 22K
R6012 4.7K
R6914 0Ω
R6306 100K
Q6305 CPH3304
R6304 18K
R6305 100K
R6307 1K
R6303 220K
R6301 100K
R6302 100K
Q6302 2SK1830
Q6303 2SJ347
C6301 0.01
Q6304 2SK1830
R6308 OPEN
C6302 OPEN
Q6301 DTC144EE
VDD OUT NC VSS
IC6301
S-80842ANNP-W
L6124 100µ
D6122 1SS357
C6126 1
C6127 1
L6123 100µ
C6111 1
R6111 4.7
C6151 1
R6151 4.7
R6131 47K
R6132 4.7
C6131 1
R6141 4.7
C6141 1
R6121 4.7
C6121 1
Q6161 CPH3304
R6182 47K
R6161 4.7
C6161 1
L6151 220µ
Q6168 DTC144EE
R6181 100K
R6180 82K
D6165 MA8091/L/
5
4
3
2
1
A
B
C
D

NOTE : COMPARISION CHART OF MODELS & MARKS (#).

REF. NO MODELS	Q6164	R6171	C6165
GR-DVL100	USED	USED	USED
GR-DVL300	USED	USED	USED
GR-DVL305	USED	USED	USED
GR-DVL307	OPEN	OPEN	OPEN
GR-DVL500	OPEN	OPEN	OPEN
GR-DVL507	OPEN	OPEN	OPEN

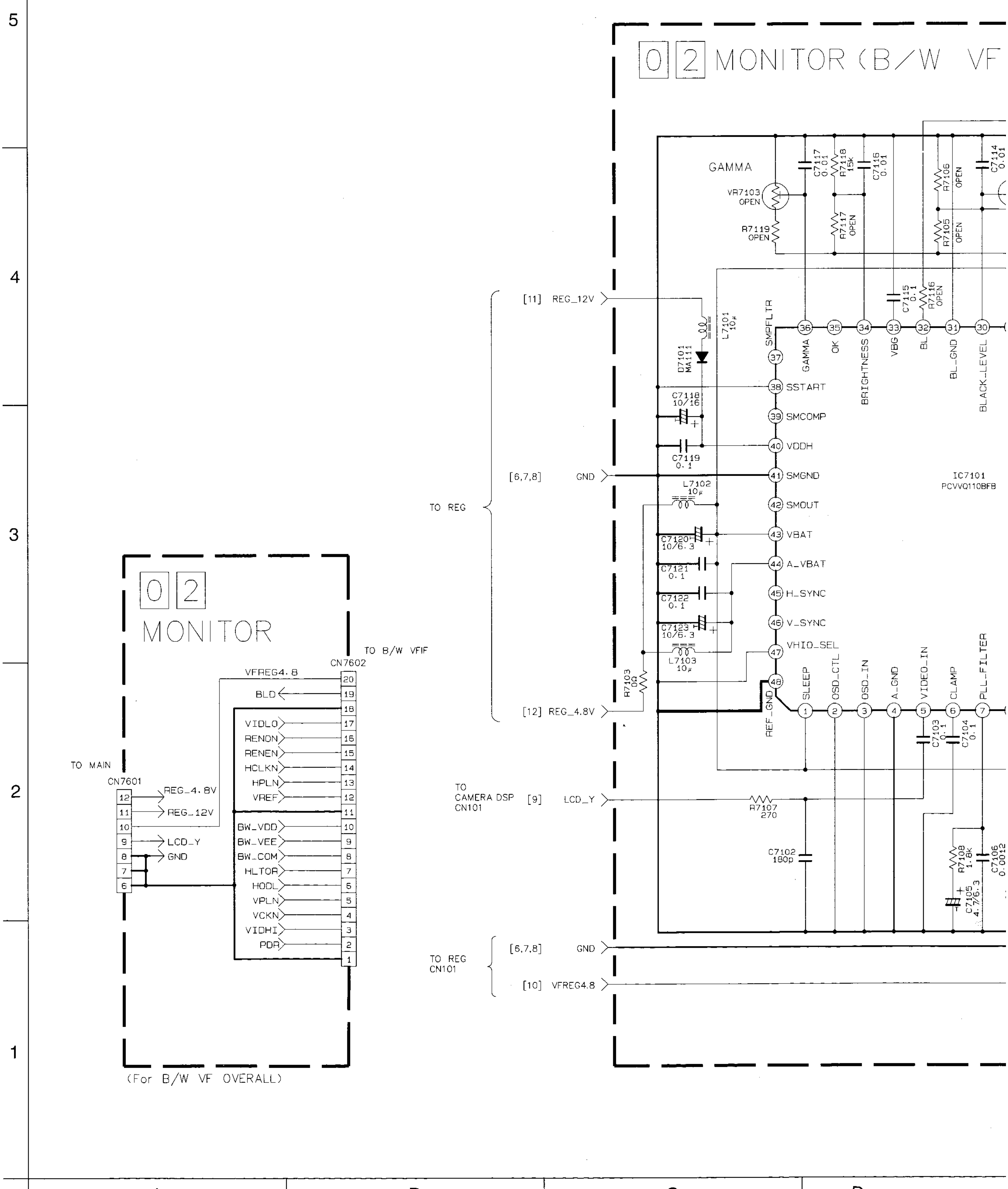
the destination of each signal and further line connections that are cut off from diagram, refer to "4.1 BOARD INTERCONNECTIONS".

n ordering parts, be sure to order according to the Part Number indicated in the Parts List.


CN104
1 LP_UNREG
2 GND
TO DC LIGHT
SP_UNREG
DRUM_PWR
Z_UNREG
TO IRIS & AF/ZOOM
UNREG
LP_UNREG
TP6002
DSC_3.1V
(OPEN)
LM_4.8V
TO MDA
LAMP_ON
TO SYSCON
CN101
3 A_REG_3V
TO MONITOR CN7601
A_REG_3V
GND
REG_2.2V
REG_1.8V
CN101
6 GND
7 GND
8 GND
10 VFREG4.8
11 REG_12V
12 REG_4.8V
13 REG_4.8V
TO MONITOR CN7601
DRUM_ERR
TO MDA
D_GAIN
TO DECK CPU
CAP_PWR
CAP_ERR
TO MDA
REG_4.8V
VFREG4.8
VF_CTL
TO SYSCON
REG_12V
REG_15V
CN101
23 REG_15V
24 REG_-15V
26 REG_4.8V
27 REG_4.8V
29 GND
30 GND
TO MONITOR CN7601
CN102
12 REG_4.8V
16 GND
18 A_REG_3V
TO JACK CN501
REG_-15V
REG-6.5V
TO TG/VDR
PWR_CTL
SW_UNREG
AL_3V
TO SYSCON
REG_-4.5V
TO V OUT
L6401 22μ
Q6201 2SA1774/QR/-X
Q6202 2SD1621(TU)
R6201 10K
R6202 180
R6203 10K
Q6203 2SC4617/QR/-X
R6205 180K
R6206 1K
R6204 OPEN
C6201 10/16
C6401 1
R6116 OPEN
Q6111 CPH3304
L6111 39μ
Q6112 OPEN
R5115 OPEN
D6111 CRS06
C6113 10
C6114 0.001
R6112 22K
R6113 11K
R6114 OPEN
C6402 1
L6114 22μ
Q6151 CPH3304
L6151 47μ
D6151 CRS06
C6153 10
C6154 0.0047
R6152 12K
R6153 11K
D6152 CRS06
C6157 OPEN
R6154 OPEN
C6155
Q6131 CPH3304
R6132 4.7
L6131 47μ
D6131 CRS06
C6132 1
C6134 OPEN
R6133 24K
R6134 3K
C6133 0.068
R6136 10K
R6135 12K
R6138 10K
Q6132 DTC144EE
Q6141 CPH3304
L6141 47μ
D6141 CRS06
C6142 1
C6144 OPEN
R6142 47K
R6143 5.6K
R6144 0Ω
C6143 0.22
R6146 47K
R6145 22K
L6121 39μ
Q6121 CPH3304
R6129 OPEN
Q6122 OPEN
D6121 CRS06
C6123 10
C6124 0.001
R6122 18K
R6124 OPEN
R6123 4.7K
F6003 NMFZ006-R50X-J1
F6004 OPEN
L6202 OPEN
Q6123 2SB1121/TU/-X
R6125 10K
R6126 1.5K
Q6124 2SC4617/QR/-X
R6127 47K
R6128 OPEN
C6125 10/6.3
Q6163 2SA1577/QR/-X
Q6162 HN1C01FU/G/-X
C6173 1
D6161 1SS383
L6161 220μ
C6163 0.001
C6162 1
R6162 150K
R6163 4.7K
R6164 OPEN
R6165 47K
R6166 27K
R6170 47K
R6167 8.2K
R6168 51K
R6169 82K
C6174
C6164 0.01
R6171 2.2K
Q6164 2SC4617/QR/-X
C6165 1
R6183 OPEN
C6171 1
C6159
R6172 62K
R6173 OPEN
R6175 33K
C6175 1
C6167 1
C6168 1
D6165 MA8091/L/-X
R6179 2.7K
D6163 1SS383
R6174 82K
R6176 33K
Q6165 HN1A01FU/G/-X
R6177 1K
Q6166 2SC4617/QR/-X
R6178 2.2K
Q6167 2SA1174/QR/-X

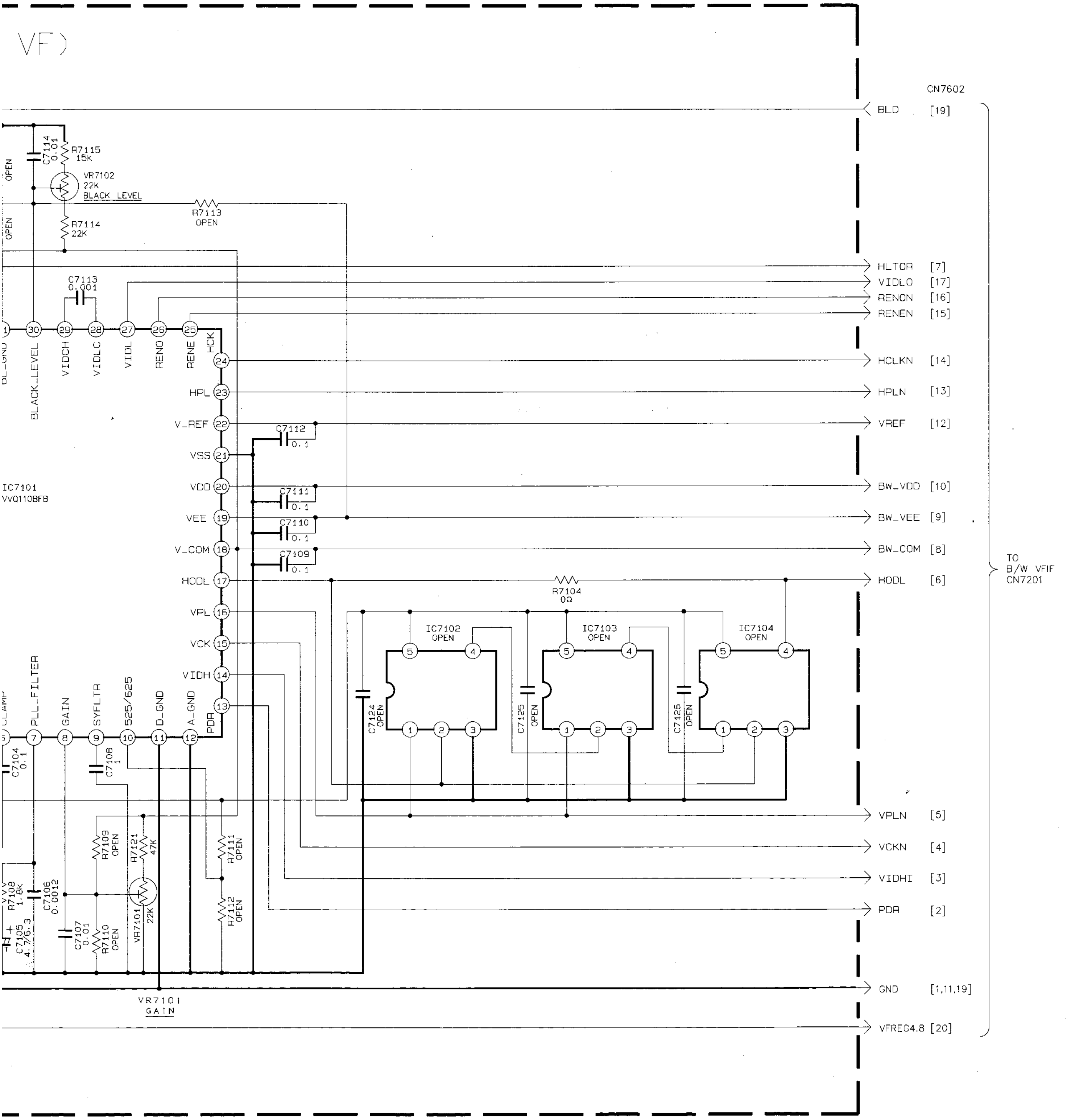
4.15 B/W VF SCHEMATIC DIAGRAM

NOTES:



02 MONITOR
(For B/W VF OVERALL)
TO MAIN
CN7601
REG_4.8V
REG_12V
LCD_Y
GND
TO B/W VFIF
CN7602
VFREG4.8
BLD
VIDLO
RENON
RENEN
HCLKN
HPLN
VREF
BW_VDD
BW_VEE
BW_COM
HLTOR
HODL
VPLN
VCKN
VIDHI
PDR
02 MONITOR (B/W VF
GAMMA
VR7103 OPEN
R7119 OPEN
C7117 0.01
R7118 15k
R7117 OPEN
C7116 0.01
R7106 OPEN
R7105 OPEN
C7114 0.01
C7115 0.1
R7116 OPEN
TO REG
[11] REG_12V
[6,7,8] GND
[12] REG_4.8V
L7101 10μ
D7101 MA111
C7118 10/16
C7119 0.1
L7102 10μ
C7120 10/6.3
C7121 0.1
C7122 0.1
C7123 10/6.3
L7103 10μ
R7103 0Ω
IC7101 PCVVQ110BFB
SMPFLTR
GAMMA
OK
BRIGHTNESS
VBG
BL
BL_GND
BLACK_LEVEL
SSTART
SMCOMP
VDDH
SMGND
SMOUT
VBAT
A_VBAT
H_SYNC
V_SYNC
VHIO_SEL
REF_GND
SLEEP
OSD_CTL
OSD_IN
A_GND
VIDEO_IN
CLAMP
PLL_FILTER
C7103 0.1
C7104 0.1
TO CAMERA DSP CN101
[9] LCD_Y
R7107 270
C7102 180p
R7108 1.8k
C7105 4.7/6.3
C7106 0.0012
TO REG CN101
[6,7,8] GND
[10] VFREG4.8

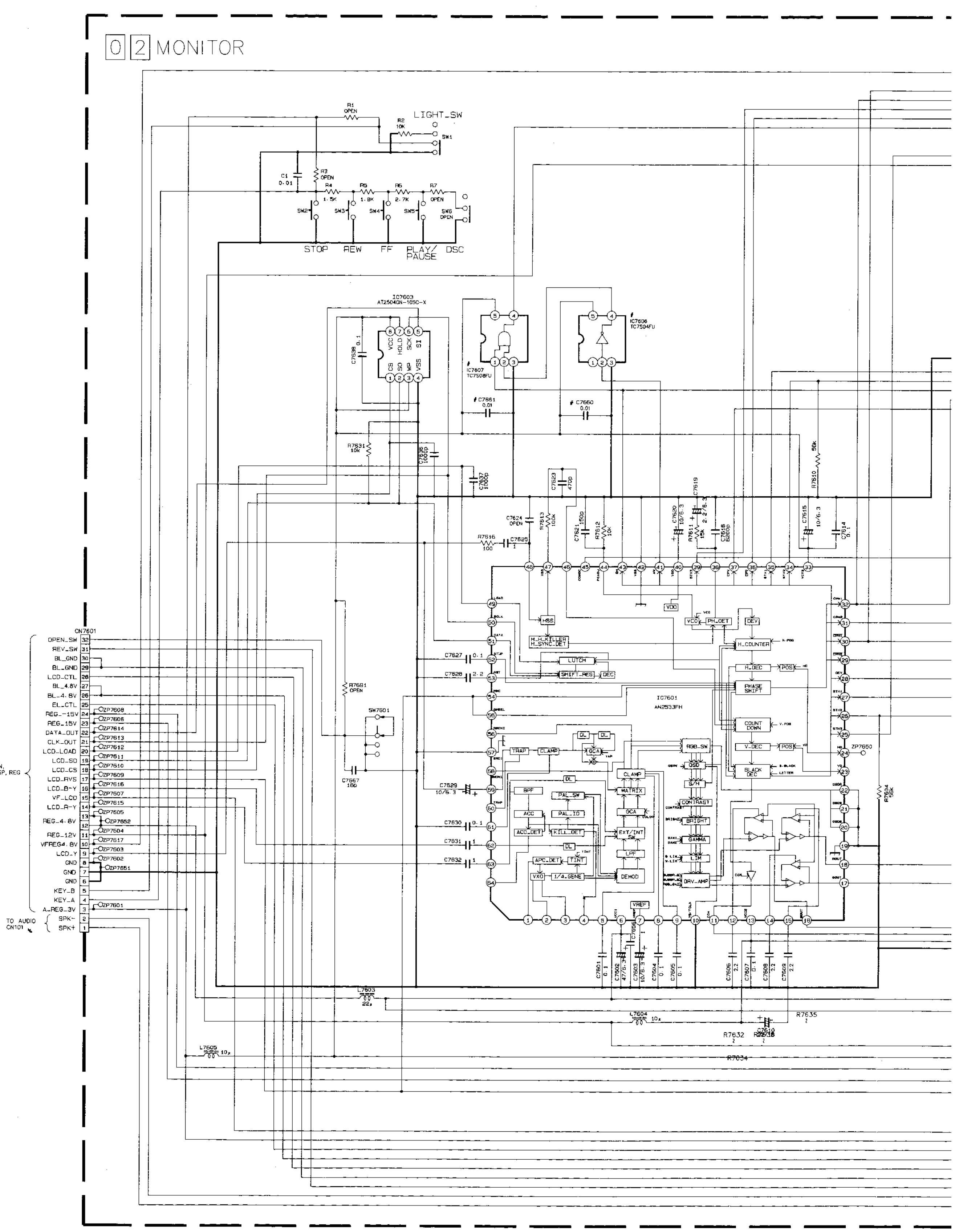
IOTES: ● ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***
● ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***



VF)
CN7602
BLD [19]
HLTOR [7]
VIDLO [17]
RENON [16]
RENEN [15]
HCLKN [14]
HPLN [13]
VREF [12]
BW_VDD [10]
BW_VEE [9]
BW_COM [8]
HODL [6]
VPLN [5]
VCKN [4]
VIDHI [3]
PDR [2]
GND [1,11,19]
VFREG4.8 [20]
TO B/W VFIF CN7201
IC7101 VVQ110BFB
C7114 0.01
R7115 15K
VR7102 22K BLACK LEVEL
R7113 OPEN
R7114 22K
OPEN
OPEN
C7113 0.001
BLACK_LEVEL
VIDCH
VIDLC
VIDL
REND
RENE
HCK
HPL
V_REF
VSS
VDD
VEE
V_COM
HODL
VPL
VCK
VIDH
PLL_FILTER
GAIN
SYFLTR
525/625
D_GND
A_GND
PDR
C7112 0.1
C7111 0.1
C7110 0.1
C7109 0.1
R7104 0Ω
IC7102 OPEN
IC7103 OPEN
IC7104 OPEN
C7124 OPEN
C7125 OPEN
C7126 OPEN
C7104 0.1
C7108 1
R7109 OPEN
R7121 47K
R7111 OPEN
R7112 OPEN
R7108 1.8K
C7106 0.0012
C7105 4.7/6.3
C7107 0.01
R7110 OPEN
VR7101 22K
VR7101 GAIN

4.16 MONITOR SCHEMATIC DIAGRAM

NO

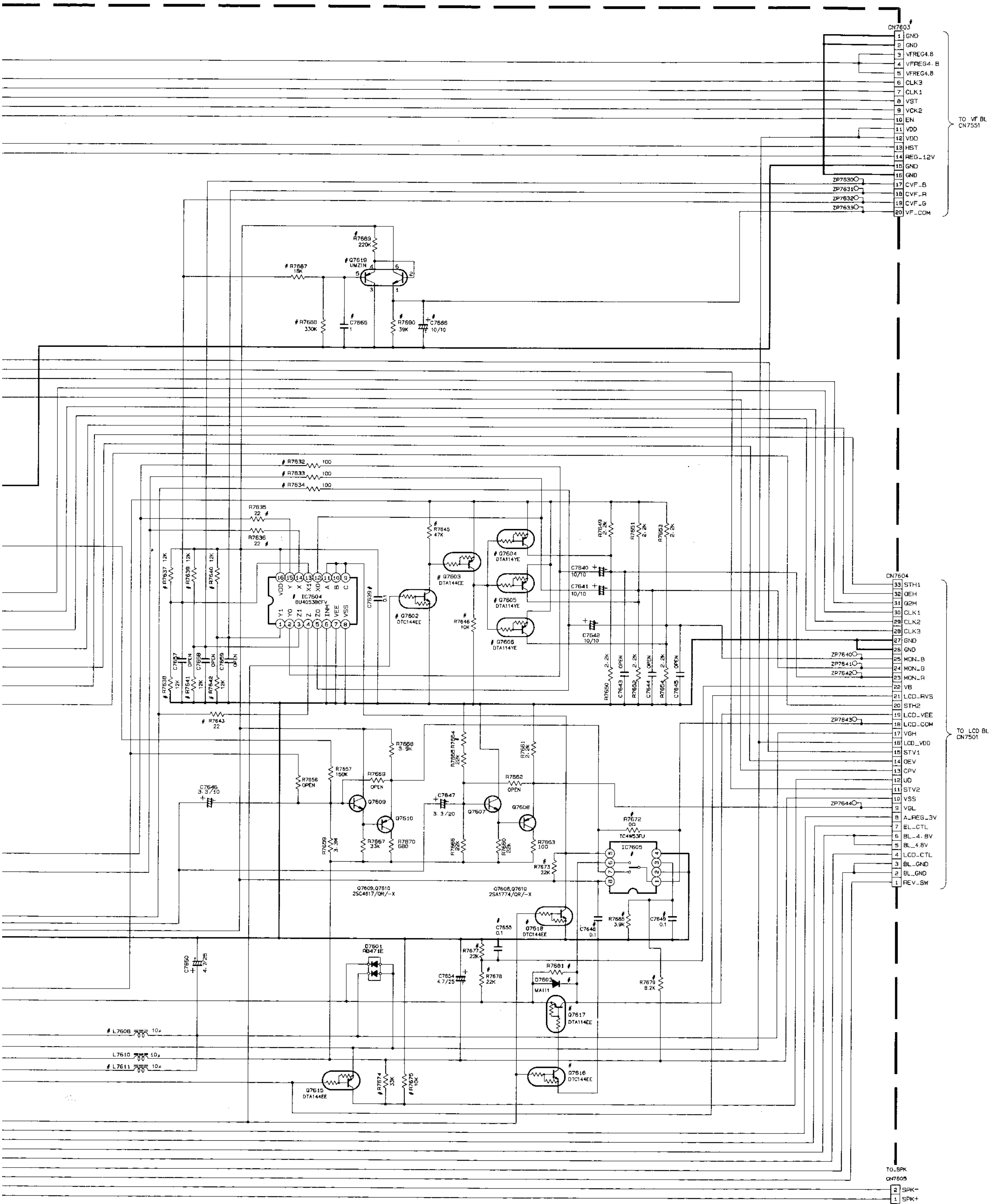

0 2 MONITOR
LIGHT_SW
SW1
R1 OPEN
R2 10K
C1 0.01
R3 OPEN
R4 1.5K
R5 1.8K
R6 2.7K
R7 OPEN
SW2
SW3
SW4
SW5
SW6 OPEN
STOP
REW
FF
PLAY/PAUSE
DSC
IC7603 AT25040N-10SC-X
VCC HOLD SCK SI
CS SO WP VSS
C7638 0.1
# IC7607 TC7S08FU
# IC7606 TC7S04FU
# C7661 0.01
# C7660 0.01
R7631 10k
C7636 1000p
C7637 1000p
C7623 470p
C7624 OPEN
R7613 100k
C7621 150p
R7612 10K
C7620 10/6.3
C7619 2.2/6.3
R7611 15k
C7618 8200p
R7610 56k
C7615 10/6.3
C7614 0.1
R7616 100
C7625 1
C7627 0.1
C7628 2.2
C7629 10/6.3
C7630 0.1
C7631 1
C7632 1
R7681 OPEN
SW7601
C7667 180
IC7601 AN2533FH
HSS
H_H_KILLER H_SYNC_DET
LUTCH
SHIFT_RES
DEC
VDD
VCO
PH_DET
DEV
H_COUNTER
H_DEC
POS
PHASE SHIFT
COUNT DOWN
V_DEC
POS
BLACK DEC
TRAP
CLAMP
DL
GCA
BPF
PAL_SW
ACC
PAL_ID
ACC_DET
KILL_DET
APC_DET
TINT
VXO
1/4_GENE
CLAMP
MATRIX
GCA
EXT/INT SW
LPF
DEMOD
RGB_SW
OSD
S/H
CONTRAST
BRIGHT
GAMMA
LIM
DRV_AMP
VREF
ZP7650
R7604 56k
C7601 0.1
C7602 47/6.3
C7656 1
C7603 10/6.3
C7604 0.1
C7605 0.1
C7606 2.2
C7607 0.1
C7608 2.2
C7609 2.2
L7603 22μ
L7604 10μ
L7605 10μ
R7635
R7632
R7633
C7610
R7634
CN7601
OPEN_SW 32
REV_SW 31
BL_GND 30
BL_GND 29
LCD_CTL 28
BL_4.8V 27
BL_4.8V 26
EL_CTL 25
REG_-15V 24
REG_15V 23
DATA_OUT 22
CLK_OUT 21
LCD_LOAD 20
LCD_SO 19
LCD_CS 18
LCD_RVS 17
LCD_B-Y 16
VF_LCD 15
LCD_R-Y 14
REG_4.8V 13 12
REG_12V 11
VFREG4.8V 10
LCD_Y 9
GND 8
GND 7
GND 6
KEY_B 5
KEY_A 4
A_REG_3V 3
SPK- 2
SPK+ 1
ZP7608
ZP7606
ZP7614
ZP7613
ZP7612
ZP7611
ZP7610
ZP7609
ZP7616
ZP7607
ZP7615
ZP7605
ZP7652
ZP7604
ZP7617
ZP7603
ZP7602
ZP7651
ZP7601
TO SYSCON, CAMERA DSP, REG CN101
TO AUDIO CN101

NOTE : COMPARISION CHART OF MODELS & MARKS (#).

REF. NO / MODELS	IC7604 ~ IC7607	Q7602 ~ Q7606	Q7616 ~ Q7619	D7603	R7632 ~ R7634	R7635 ~ R7643	R7645 R7646	R7664	R7672	R7673	R7674	R7675	R7677 R7678	R7679	R7681	R7685 ~ R7690	C7639 C7648 C7649	C7655	C7660,C7661 C7665,C7666	L7608	L7611	CN7603
GR-DVL100	OPEN	OPEN	OPEN	OPEN	USED	OPEN	OPEN	22K	USED	OPEN	OPEN	USED	OPEN	OPEN	0Ω	OPEN	OPEN	OPEN	OPEN	OPEN	USED	OPEN
GR-DVL300	OPEN	OPEN	OPEN	OPEN	USED	OPEN	OPEN	22K	USED	OPEN	OPEN	USED	OPEN	OPEN	0Ω	OPEN	OPEN	OPEN	OPEN	OPEN	USED	OPEN
GR-DVL305	USED	USED	USED	USED	OPEN	USED	USED	22K	OPEN	USED	OPEN	USED	OPEN	USED	330	USED	USED	OPEN	USED	OPEN	USED	USED
GR-DVL307	OPEN	OPEN	OPEN	OPEN	USED	OPEN	OPEN	6.8K	USED	OPEN	USED	OPEN	USED	OPEN	0Ω	OPEN	OPEN	USED	OPEN	USED	OPEN	OPEN
GR-DVL500	USED	USED	USED	USED	OPEN	USED	USED	6.8K	OPEN	USED	USED	OPEN	USED	USED	330	USED	USED	USED	USED	USED	OPEN	USED
GR-DVL507	OPEN	OPEN	OPEN	OPEN	USED	OPEN	OPEN	6.8K	USED	OPEN	USED	OPEN	USED	OPEN	0Ω	OPEN	OPEN	USED	OPEN	USED	OPEN	OPEN

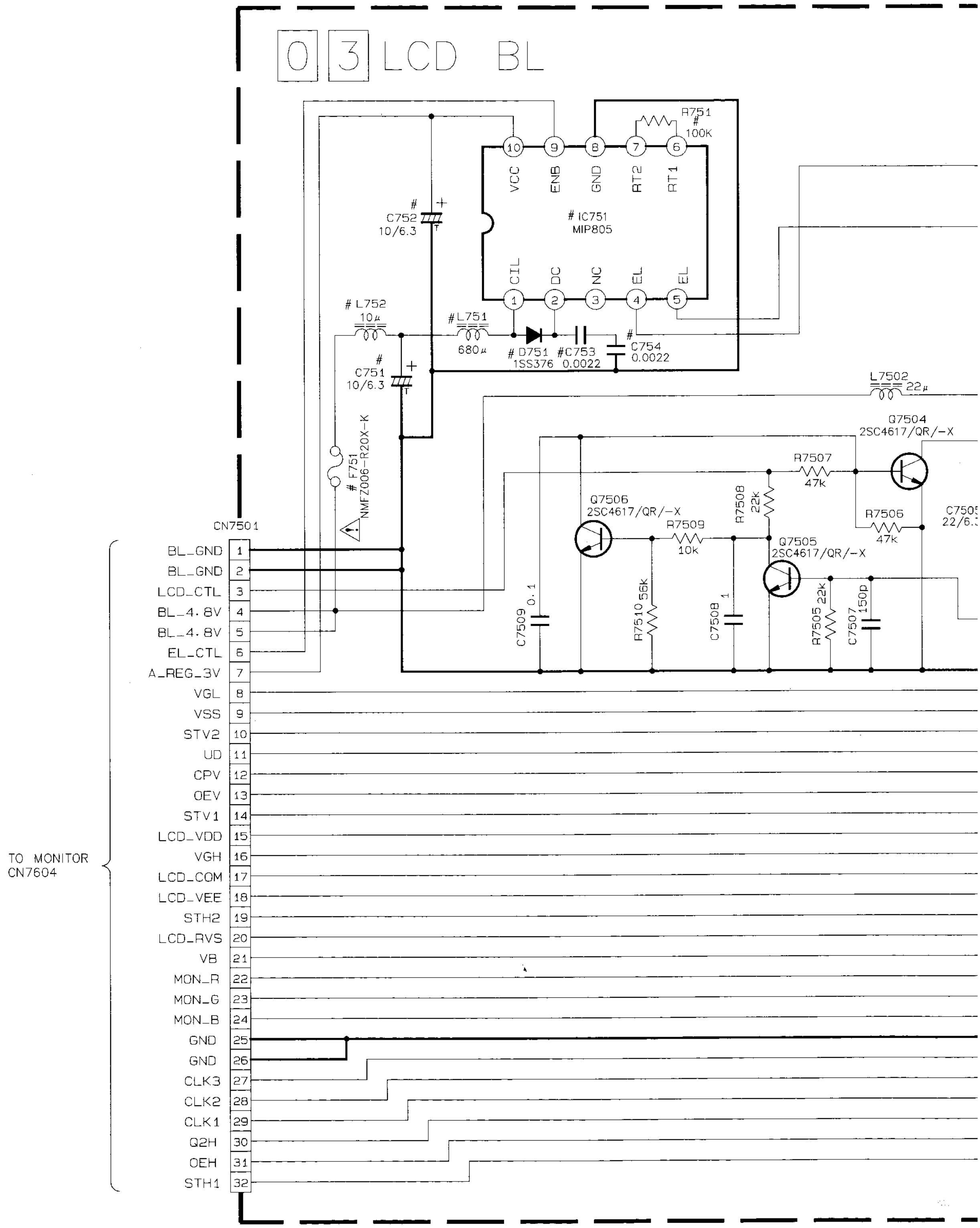
NOTES: ***● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***

● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.


CN7603 #
1 GND
2 GND
3 VFREG4.8
4 VFREG4. 8
5 VFREG4.8
6 CLK3
7 CLK1
8 VST
9 VCK2
10 EN
11 VDD
12 VDD
13 HST
14 REG_12V
15 GND
16 GND
17 CVF_B
18 CVF_R
19 CVF_G
20 VF_COM
ZP7630
ZP7631
ZP7632
ZP7633
TO VF BL CN7551
# R7689 220K
# Q7619 UMZ1N
# R7687 18K
# R7688 330K
# C7665 1
# R7690 39K
# C7666 10/10
# R7632 100
# R7633 100
# R7634 100
R7635 22 #
R7636 22 #
# R7637 12K
# R7639 12K
# R7640 12K
# IC7604 BU4053BCFV
VDD Y X X1 X0 A B C
Y1 Y0 Z1 Z Z0 INH VEE VSS
C7639 # 0.1
# Q7602 DTC144EE
# R7645 47K
# Q7603 DTA144EE
# R7646 10K
# Q7604 DTA114YE
# Q7605 DTA114YE
# Q7606 DTA114YE
R7649 2.2K
R7651 2.2K
R7653 2.2K
C7640 10/10
C7641 10/10
C7642 10/10
R7650 2.2K
C7643 OPEN
R7652 2.2K
C7644 OPEN
R7654 2.2K
C7645 OPEN
C7657 OPEN
C7658 OPEN
C7659 OPEN
# R7638 12K
# R7641 12K
# R7642 12K
# R7643 22
R7668 3.9K
R7657 150K
R7656 OPEN
R7659 OPEN
C7646 3.3/10
Q7609
Q7610
R7658 3.3M
R7667 33K
R7670 680
R7665 R7664 22K
C7647 3.3/20
Q7607
R7661 2.2K
R7662 OPEN
Q7608
R7666 22K
R7660 22K
R7663 100
# R7672 0Ω
TC4W53FU
IC7605 #
# R7673 22K
Q7609,Q7610 2SC4617/QR/-X
Q7608,Q7610 2SA1774/QR/-X
# C7655 0.1
# Q7618 DTC144EE
# C7648 0.1
# R7685 3.9K
# C7649 0.1
C7650 4.7/25
D7601 RB471E
# R7677 22K
C7654 4.7/25
# R7678 22K
R7681 #
D7603 # MA111
# Q7617 DTA114EE
R7679 # 8.2K
# L7608 10μ
L7610 10μ
# L7611 10μ
Q7615 DTA144EE
# R7674 33K
# R7675 10K
# Q7616 DTC144EE
CN7604
33 STH1
32 OEH
31 Q2H
30 CLK1
29 CLK2
28 CLK3
27 GND
26 GND
25 MON_B
24 MON_G
23 MON_R
22 VB
21 LCD_RVS
20 STH2
19 LCD_VEE
18 LCD_COM
17 VGH
16 LCD_VDD
15 STV1
14 OEV
13 CPV
12 UD
11 STV2
10 VSS
9 VGL
8 A_REG_3V
7 EL_CTL
6 BL_4. 8V
5 BL_4.8V
4 LCD_CTL
3 BL_GND
2 BL_GND
1 REV_SW
ZP7640
ZP7641
ZP7642
ZP7643
ZP7644
TO LCD BL CN7501
TO_SPK CN7605
2 SPK-
1 SPK+

4.17 LCD BL SCHEMATIC DIAGRAM

NOTES: ● ***For the des***
this diagra
● ***When orde***



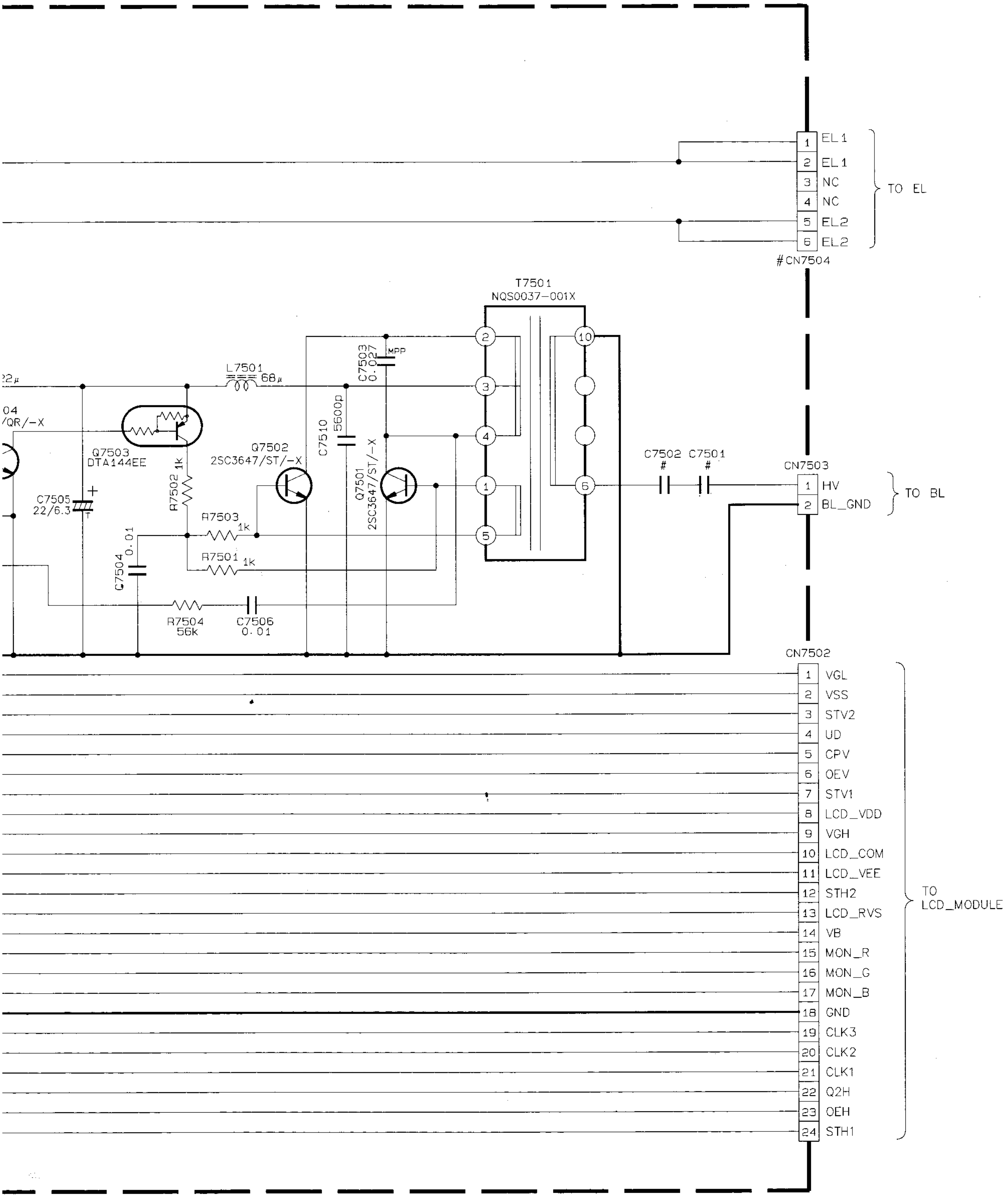
0 3 LCD BL
R751
#
100K
10 VCC
9 ENB
8 GND
7 RT2
6 RT1
# IC751
MIP805
1 CIL
2 DC
3 NC
4 EL
5 EL
#
C752
10/6.3
# L752
10μ
# L751
680μ
# D751
1SS376
#C753
0.0022
#
C754
0.0022
#
C751
10/6.3
# F751
NMFZ006-R20X-K
L7502
22μ
Q7504
2SC4617/QR/-X
R7507
47k
Q7506
2SC4617/QR/-X
R7508
22k
R7509
10k
Q7505
2SC4617/QR/-X
R7506
47k
C7505
22/6.3
C7509
0.1
R7510
56k
C7508
1
R7505
22k
C7507
150p
CN7501
TO MONITOR
CN7604
BL_GND 1
BL_GND 2
LCD_CTL 3
BL_4.8V 4
BL_4.8V 5
EL_CTL 6
A_REG_3V 7
VGL 8
VSS 9
STV2 10
UD 11
CPV 12
OEV 13
STV1 14
LCD_VDD 15
VGH 16
LCD_COM 17
LCD_VEE 18
STH2 19
LCD_RVS 20
VB 21
MON_R 22
MON_G 23
MON_B 24
GND 25
GND 26
CLK3 27
CLK2 28
CLK1 29
Q2H 30
OEH 31
STH1 32
5
4
3
2
1
A
B
C
D

NOTE : COMPARISION CHART OF MODELS & MARKS (#).

REF. NO / MODELS	IC751	D751	R751	C751 ~ C754	C7501	C7502	L751 L752	CN7504	F751
GR-DVL100	OPEN	OPEN	OPEN	OPEN	15P	15P	OPEN	OPEN	OPEN
GR-DVL300	OPEN	OPEN	OPEN	OPEN	15P	15P	OPEN	OPEN	OPEN
GR-DVL305	OPEN	OPEN	OPEN	OPEN	15P	15P	OPEN	OPEN	OPEN
GR-DVL307	USED	USED	USED	USED	15P	18P	USED	USED	USED
GR-DVL500	USED	USED	USED	USED	15P	18P	USED	USED	USED
GR-DVL507	USED	USED	USED	USED	18P	18P	USED	USED	USED

the destination of each signal and further line connections that are cut off from diagram, refer to “4.1 BOARD INTERCONNECTIONS”.

n ordering parts, be sure to order according to the Part Number indicated in the Parts List.

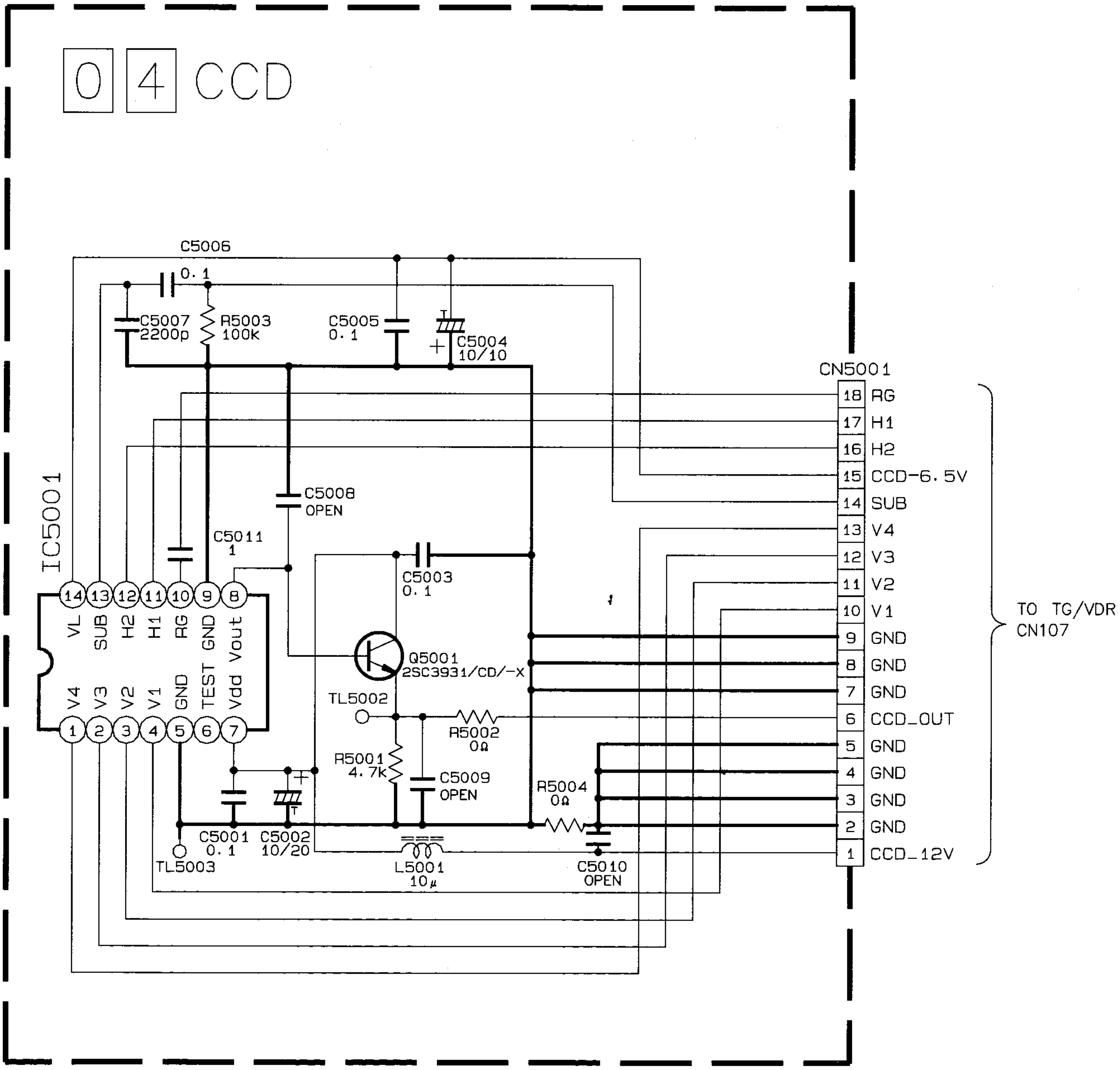


1 EL1
2 EL1
3 NC
4 NC
5 EL2
6 EL2
TO EL
#CN7504
T7501
NQS0037-001X
L7501 68μ
22μ
04
/QR/-X
C7503 0.027 MPP
C7510 5600p
Q7503 DTA144EE
Q7502 2SC3647/ST/-X
Q7501 2SC3647/ST/-X
R7502 1k
C7505 22/6.3
R7503 1k
C7504 0.01
R7501 1k
R7504 56k
C7506 0.01
C7502 #
C7501 #
CN7503
1 HV
2 BL_GND
TO BL
CN7502
1 VGL
2 VSS
3 STV2
4 UD
5 CPV
6 OEV
7 STV1
8 LCD_VDD
9 VGH
10 LCD_COM
11 LCD_VEE
12 STH2
13 LCD_RVS
14 VB
15 MON_R
16 MON_G
17 MON_B
18 GND
19 CLK3
20 CLK2
21 CLK1
22 Q2H
23 OEH
24 STH1
TO LCD_MODULE

4.18 CCD AND JUNCTION SCHEMATIC DIAGRAMS

NOTES: ● *For the destination of each signal and further line co*
this diagram, refer to "4.1 BOARD INTERCONNECTIC
● *When ordering parts, be sure to order according to tl*

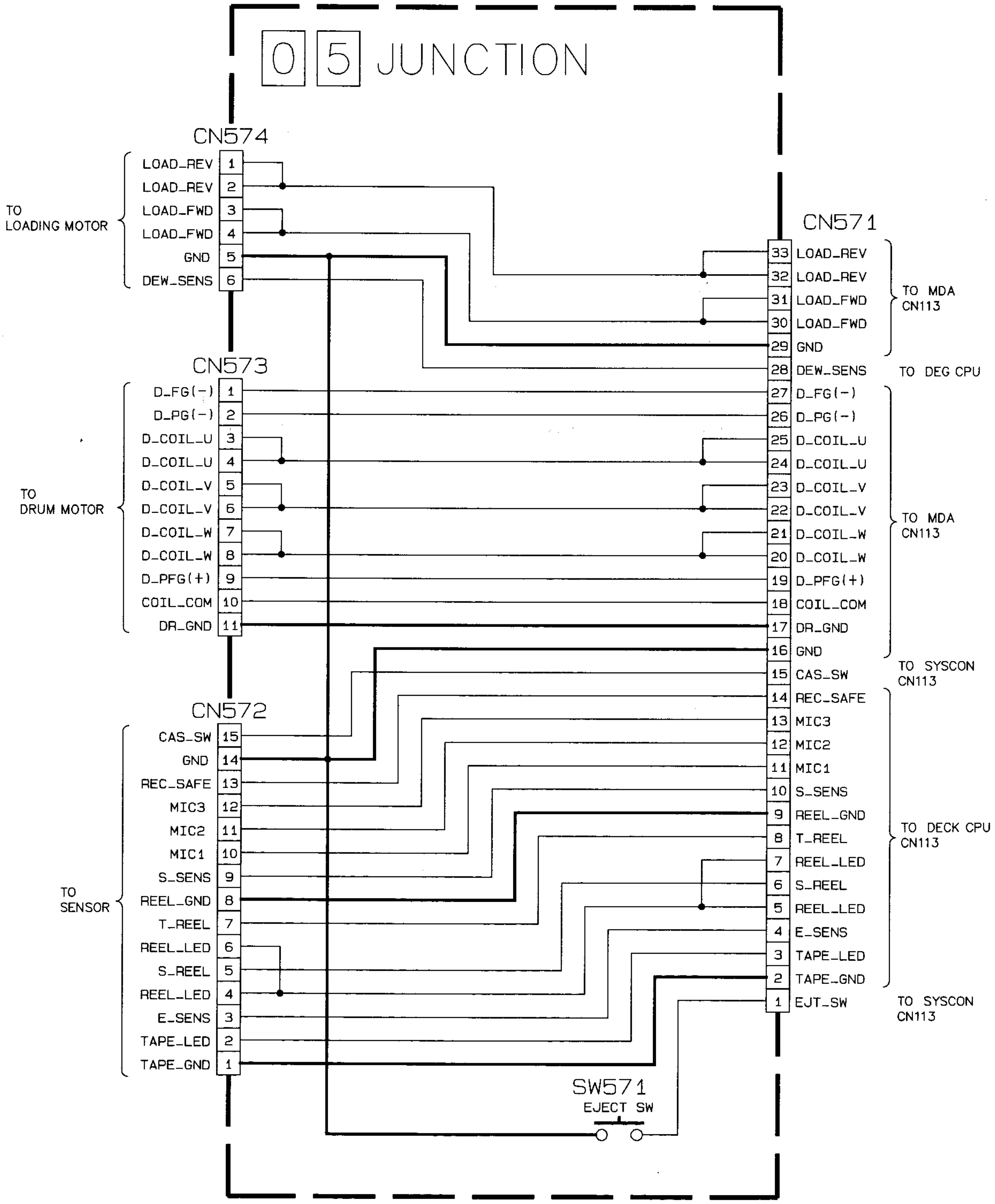
Note: IC5001 is incorporated in the CCD base assembly. When IC5001 needs replacement, replace the CCD base assembly in whole because it cannot be replaced alone.



04 CCD
IC5001
VL
SUB
H2
H1
RG
GND
Vout
V4
V3
V2
V1
GND
TEST
Vdd
C5006
0.1
C5007
2200p
R5003
100k
C5005
0.1
C5004
10/10
C5008
OPEN
C5011
1
C5003
0.1
Q5001
2SC3931/CD/-X
TL5002
R5002
0Ω
R5001
4.7k
C5009
OPEN
R5004
0Ω
C5001
0.1
C5002
10/20
TL5003
L5001
10μ
C5010
OPEN
CN5001
18 RG
17 H1
16 H2
15 CCD-6.5V
14 SUB
13 V4
12 V3
11 V2
10 V1
9 GND
8 GND
7 GND
6 CCD_OUT
5 GND
4 GND
3 GND
2 GND
1 CCD_12V
TO TG/VDR CN107

line connections that are cut off from
ECTIONS”.
ng to the Part Number indicated in the Parts List.

/VDR



05 JUNCTION
CN574
TO LOADING MOTOR
1 LOAD_REV
2 LOAD_REV
3 LOAD_FWD
4 LOAD_FWD
5 GND
6 DEW_SENS
CN573
TO DRUM MOTOR
1 D_FG(-)
2 D_PG(-)
3 D_COIL_U
4 D_COIL_U
5 D_COIL_V
6 D_COIL_V
7 D_COIL_W
8 D_COIL_W
9 D_PFG(+)
10 COIL_COM
11 DR_GND
CN572
TO SENSOR
15 CAS_SW
14 GND
13 REC_SAFE
12 MIC3
11 MIC2
10 MIC1
9 S_SENS
8 REEL_GND
7 T_REEL
6 REEL_LED
5 S_REEL
4 REEL_LED
3 E_SENS
2 TAPE_LED
1 TAPE_GND
CN571
33 LOAD_REV
32 LOAD_REV
31 LOAD_FWD
30 LOAD_FWD
29 GND
TO MDA CN113
28 DEW_SENS
TO DEG CPU
27 D_FG(-)
26 D_PG(-)
25 D_COIL_U
24 D_COIL_U
23 D_COIL_V
22 D_COIL_V
21 D_COIL_W
20 D_COIL_W
19 D_PFG(+)
18 COIL_COM
17 DR_GND
16 GND
TO MDA CN113
15 CAS_SW
TO SYSCON CN113
14 REC_SAFE
13 MIC3
12 MIC2
11 MIC1
10 S_SENS
9 REEL_GND
8 T_REEL
7 REEL_LED
6 S_REEL
5 REEL_LED
4 E_SENS
3 TAPE_LED
2 TAPE_GND
TO DECK CPU CN113
1 EJT_SW
TO SYSCON CN113
SW571
EJECT SW

4.19 JACK AND REAR SCHEMATIC DIAGRAMS

NOTES: ● *For the destination of each signal and furtl this diagram, refer to "4.1 BOARD INTERCC*

● *When ordering parts, be sure to order acco*

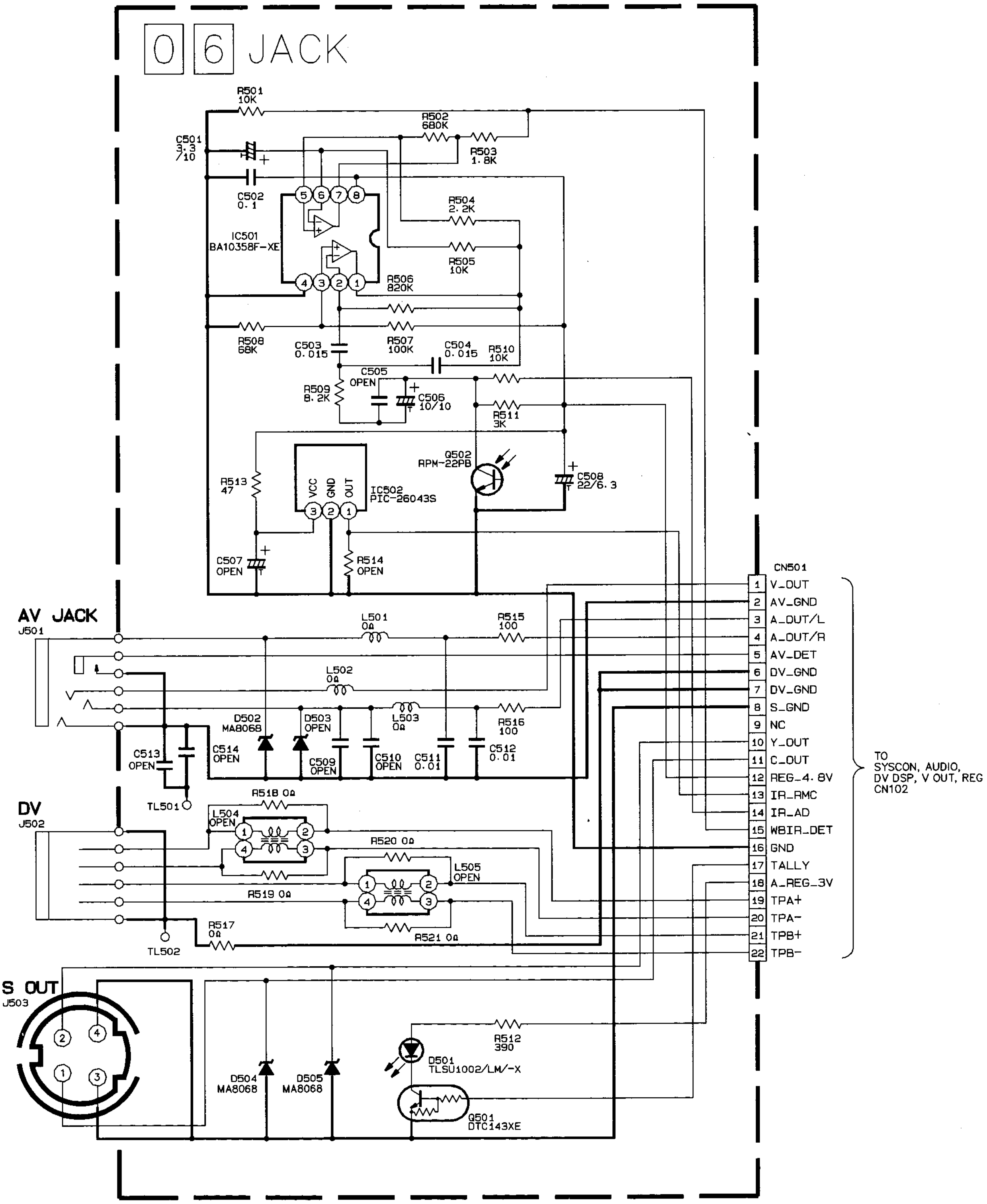
5

4

3

2

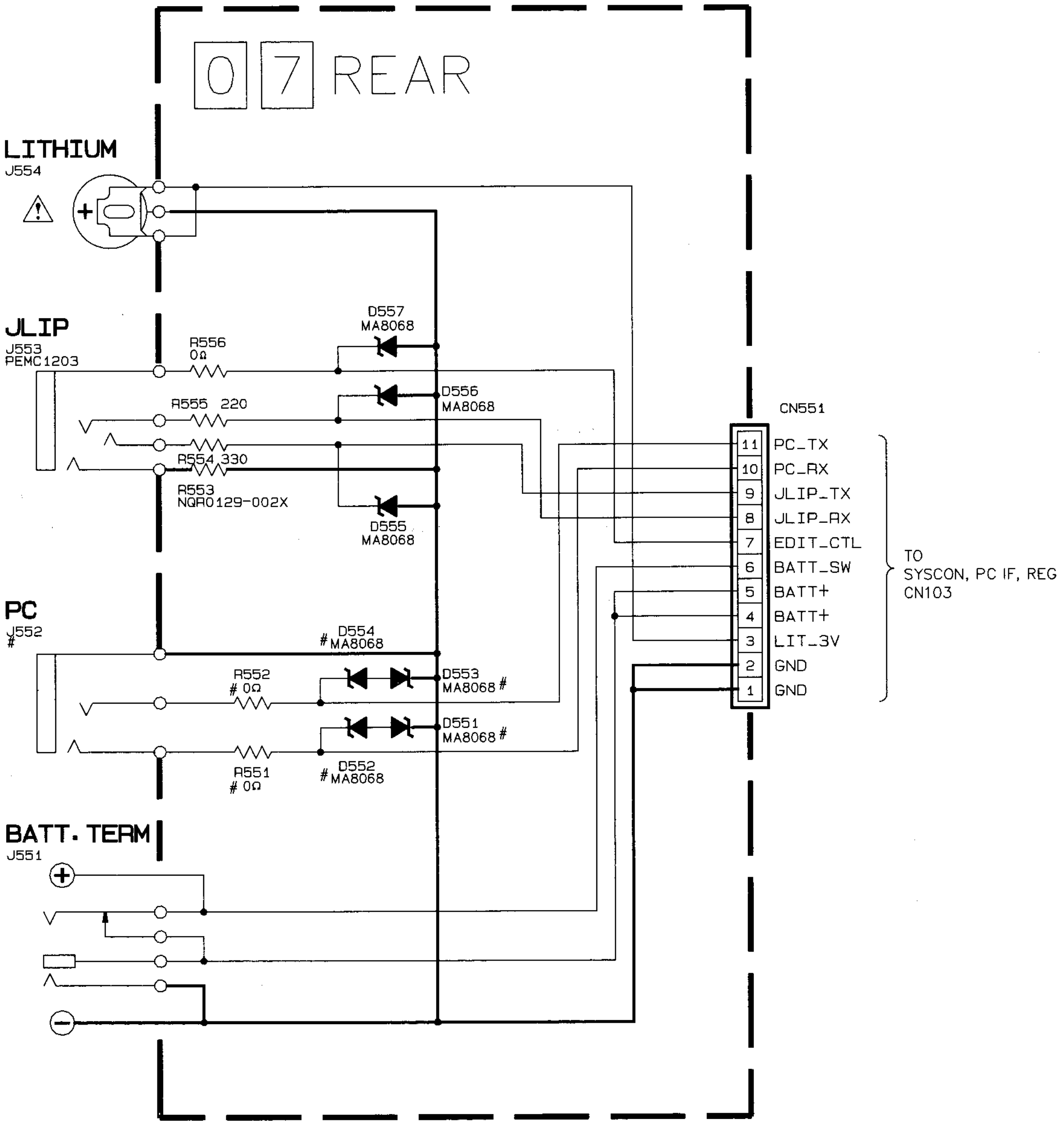
1



06 JACK
R501 10K
C501 3.3/10
C502 0.1
R502 680K
R503 1.8K
IC501 BA10358F-XE
R504 2.2K
R505 10K
R506 820K
R508 68K
C503 0.015
R507 100K
C504 0.015
R510 10K
C505 OPEN
R509 8.2K
C506 10/10
R511 3K
Q502 RPM-22PB
R513 47
IC502 PIC-26043S
VCC
GND
OUT
C508 22/6.3
C507 OPEN
R514 OPEN
AV JACK
J501
L501 0Ω
R515 100
L502 0Ω
L503 0Ω
D502 MA8068
D503 OPEN
R516 100
C513 OPEN
C514 OPEN
C509 OPEN
C510 OPEN
C511 0.01
C512 0.01
TL501
DV
J502
R518 0Ω
L504 OPEN
R520 0Ω
L505 OPEN
R519 0Ω
R517 0Ω
R521 0Ω
TL502
S OUT
J503
D504 MA8068
D505 MA8068
R512 390
D501 TLSU1002/LM/-X
Q501 DTC143XE
CN501
1 V_OUT
2 AV_GND
3 A_OUT/L
4 A_OUT/R
5 AV_DET
6 DV_GND
7 DV_GND
8 S_GND
9 NC
10 Y_OUT
11 C_OUT
12 REG_4.8V
13 IR_RMC
14 IR_AD
15 WBIR_DET
16 GND
17 TALLY
18 A_REG_3V
19 TPA+
20 TPA-
21 TPB+
22 TPB-
TO SYSCON, AUDIO, DV DSP, V OUT, REG CN102

A | B | C | D

ıd further line connections that are cut off from 'TERCONNECTIONS".
ɜr according to the Part Number indicated in the Parts List.


0 7 REAR
LITHIUM
J554
JLIP
J553
PEMC1203
R556
0Ω
R555 220
R554 330
R553
NQR0129-002X
D557
MA8068
D556
MA8068
D555
MA8068
PC
J552
#
D554
# MA8068
R552
# 0Ω
D553
MA8068 #
D551
MA8068 #
R551
# 0Ω
D552
# MA8068
BATT. TERM
J551
CN551
11 PC_TX
10 PC_RX
9 JLIP_TX
8 JLIP_RX
7 EDIT_CTL
6 BATT_SW
5 BATT+
4 BATT+
3 LIT_3V
2 GND
1 GND
TO
SYSCON, PC IF, REG
CN103

EG

NOTE : COMPARISON CHART OF MODELS & MARKS (#).

REF. NO MODELS	D551 ~ D554	R551 R552	J552
GR-DVL100	OPEN	OPEN	OPEN
GR-DVL300	USED	USED	USED
GR-DVL305	OPEN	OPEN	OPEN
GR-DVL307	OPEN	OPEN	OPEN
GR-DVL500	USED	USED	USED
GR-DVL507	USED	USED	USED

4.20 B/W VFIF AND ZOOM UNIT SCHEMATIC DIAGRAMS

NOTES: ***● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***

● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

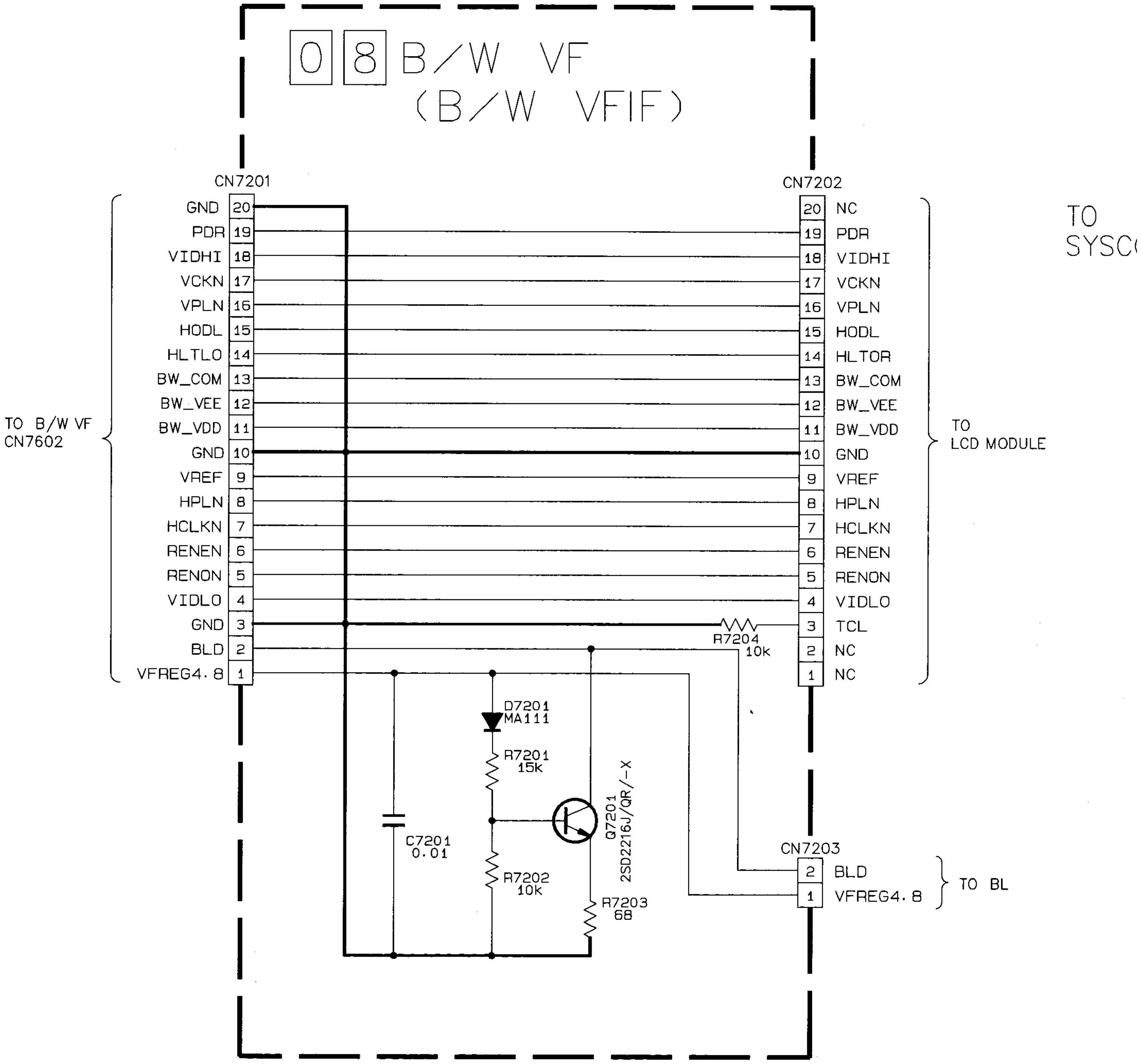
5

4

3

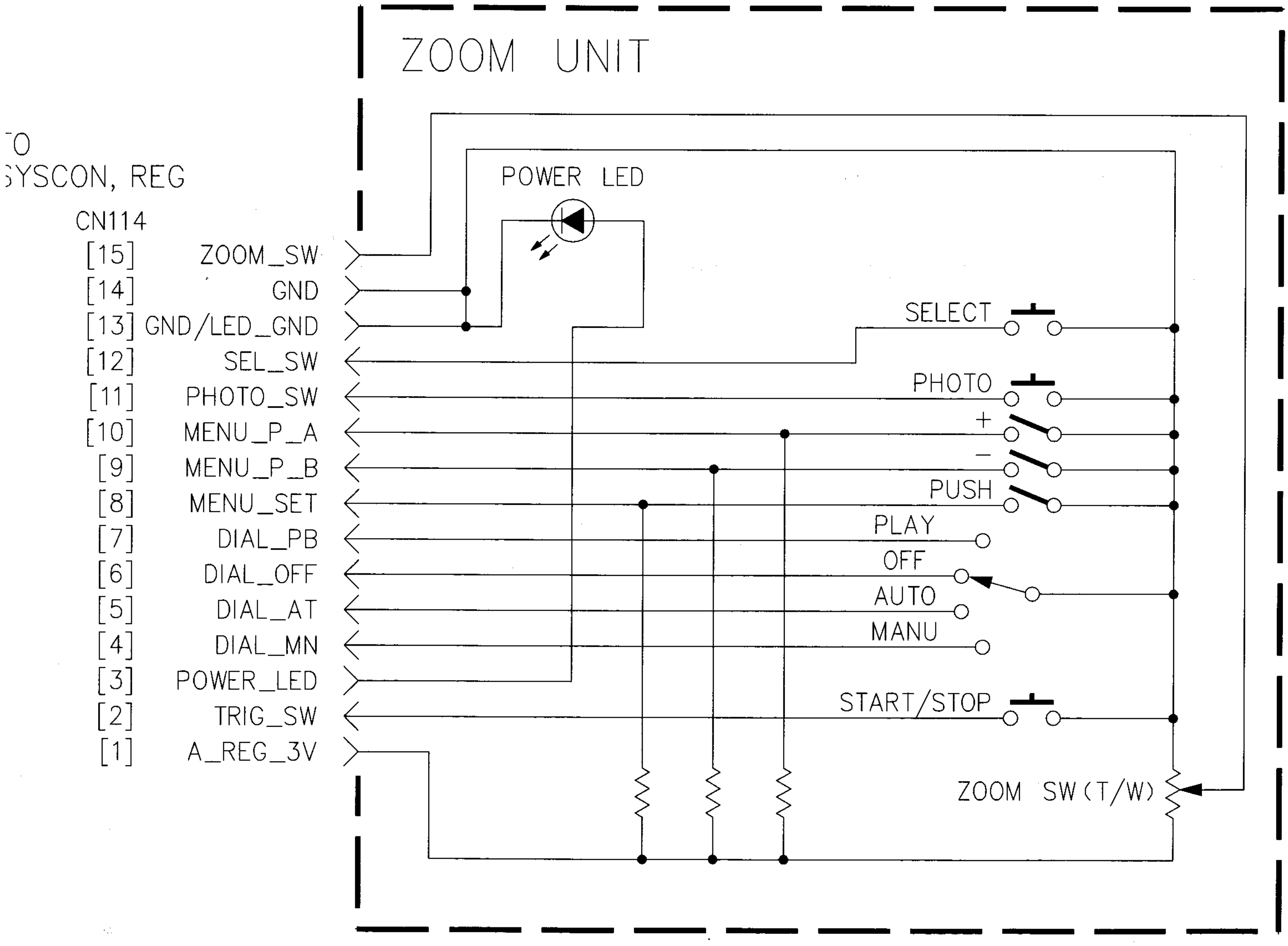
2

1


08 B/W VF
(B/W VFIF)
CN7201
CN7202
TO SYSC
GND 20
PDR 19
VIDHI 18
VCKN 17
VPLN 16
HODL 15
HLTLO 14
BW_COM 13
BW_VEE 12
BW_VDD 11
GND 10
VREF 9
HPLN 8
HCLKN 7
RENEN 6
RENON 5
VIDLO 4
GND 3
BLD 2
VFREG4.8 1
TO B/W VF CN7602
20 NC
19 PDR
18 VIDHI
17 VCKN
16 VPLN
15 HODL
14 HLTOR
13 BW_COM
12 BW_VEE
11 BW_VDD
10 GND
9 VREF
8 HPLN
7 HCLKN
6 RENEN
5 RENON
4 VIDLO
3 TCL
2 NC
1 NC
TO LCD MODULE
R7204 10k
D7201 MA111
R7201 15k
C7201 0.01
R7202 10k
Q7201 2SD2216J/QR/-X
R7203 68
CN7203
2 BLD
1 VFREG4.8
TO BL

NOTES: ● ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***

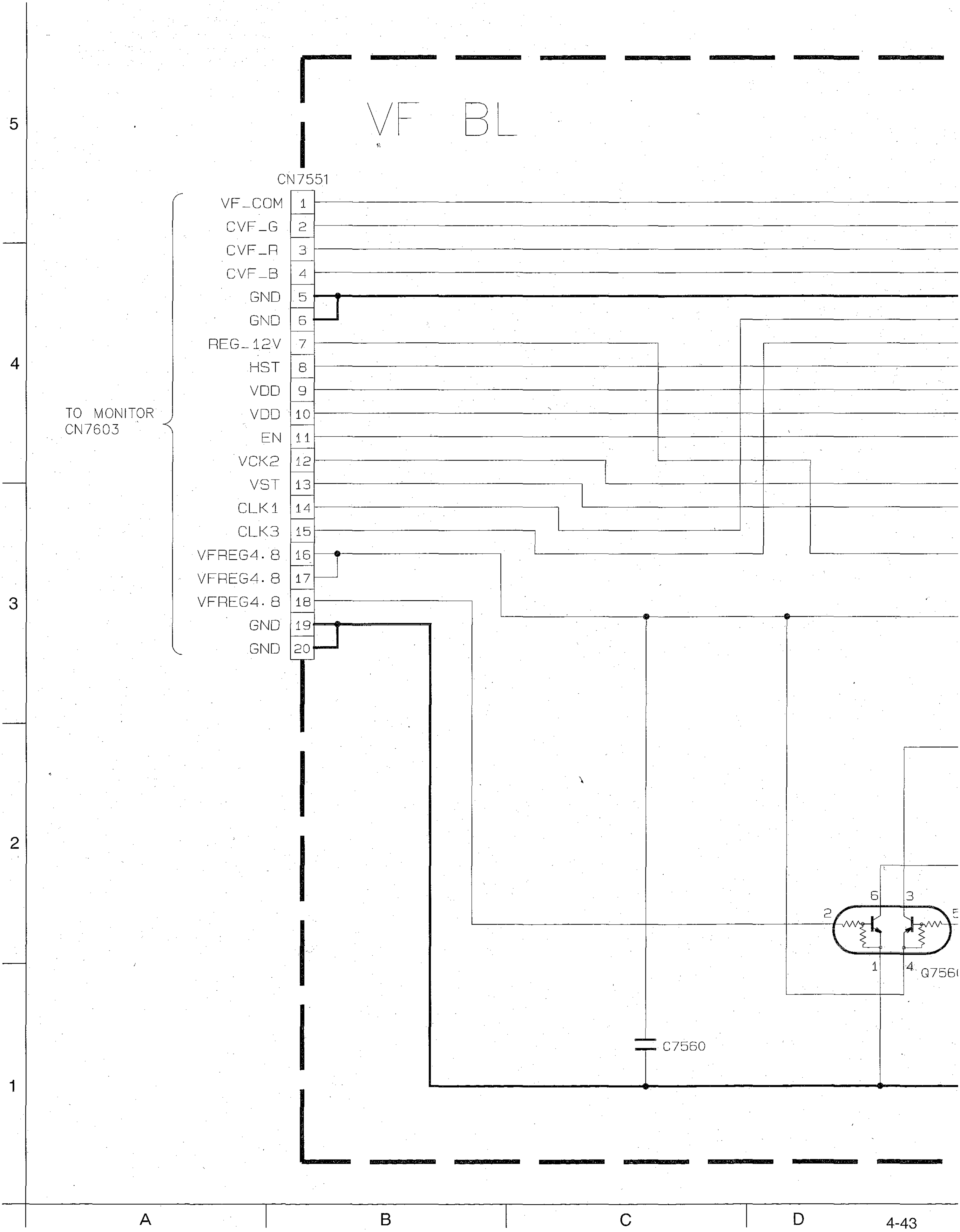
● ***The schematic diagram is only for reference. Avoid replacing individual parts. Replace the entire unit only.***



ZOOM UNIT
O
YSCON, REG
CN114
[15] ZOOM_SW
[14] GND
[13] GND/LED_GND
[12] SEL_SW
[11] PHOTO_SW
[10] MENU_P_A
[9] MENU_P_B
[8] MENU_SET
[7] DIAL_PB
[6] DIAL_OFF
[5] DIAL_AT
[4] DIAL_MN
[3] POWER_LED
[2] TRIG_SW
[1] A_REG_3V
POWER LED
SELECT
PHOTO
+
−
PUSH
PLAY
OFF
AUTO
MANU
START/STOP
ZOOM SW(T/W)

4.21 VF BL SCHEMATIC DIAGRAM

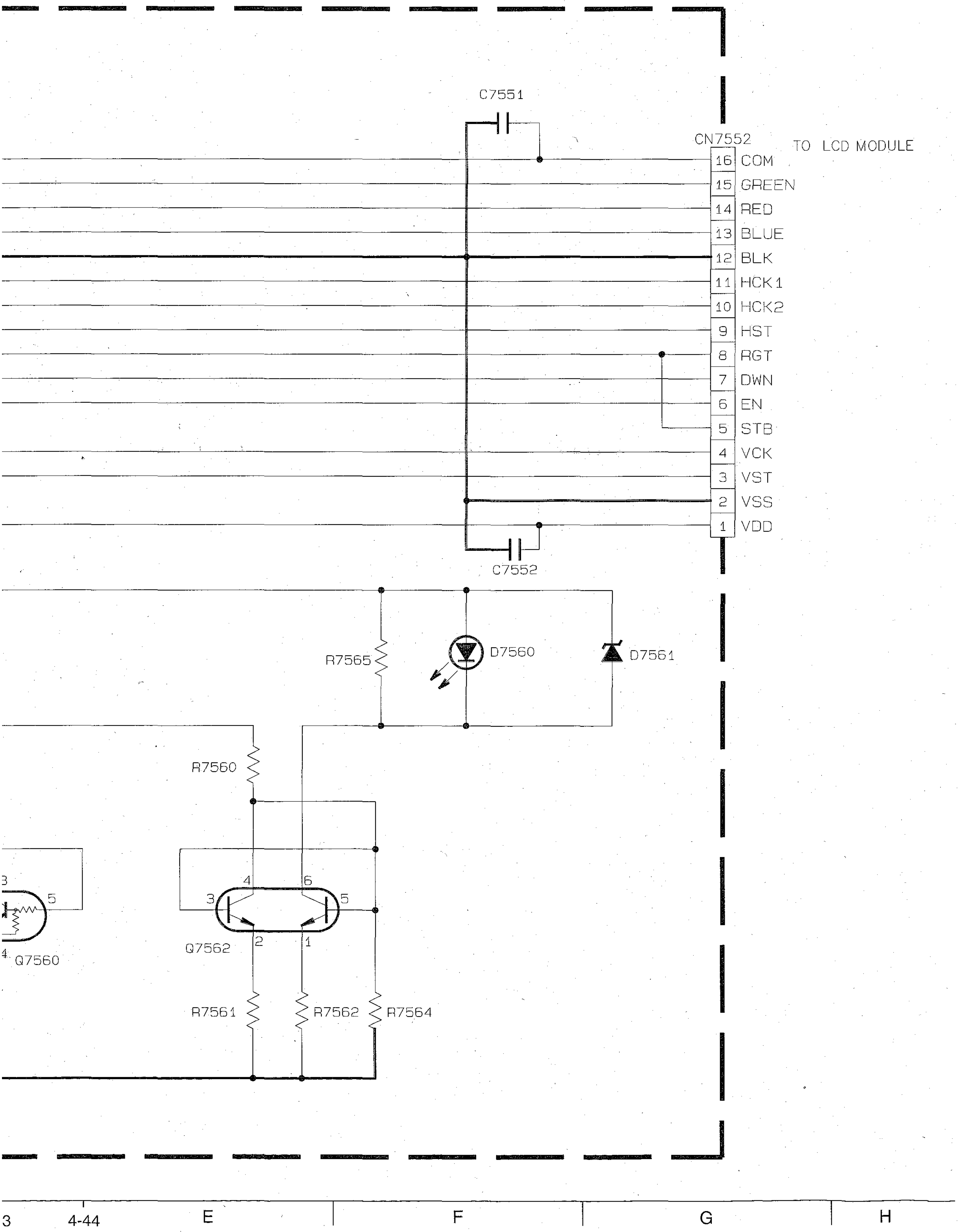
NOT



VF BL
CN7551
TO MONITOR CN7603
VF_COM 1
CVF_G 2
CVF_R 3
CVF_B 4
GND 5
GND 6
REG_12V 7
HST 8
VDD 9
VDD 10
EN 11
VCK2 12
VST 13
CLK1 14
CLK3 15
VFREG4.8 16
VFREG4.8 17
VFREG4.8 18
GND 19
GND 20
C7560
Q756
2
6
3
5
1
4
5
4
3
2
1
A
B
C
D

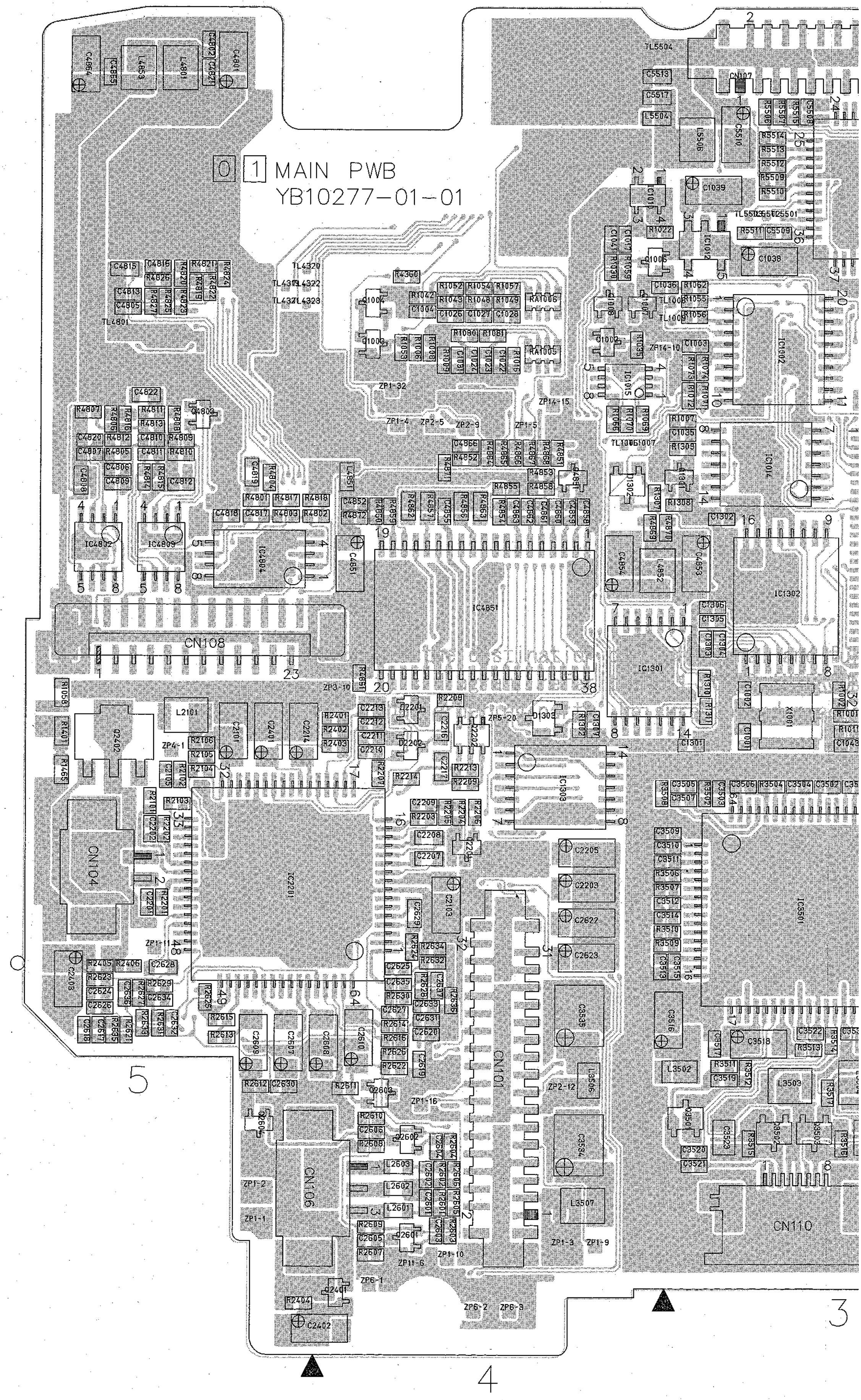
NOTES: ● ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***

● ***The schematic diagram is only for reference. Avoid replacing individual parts. Replace the entire unit only.***


C7551
CN7552
TO LCD MODULE
16 COM
15 GREEN
14 RED
13 BLUE
12 BLK
11 HCK1
10 HCK2
9 HST
8 RGT
7 DWN
6 EN
5 STB
4 VCK
3 VST
2 VSS
1 VDD
C7552
R7565
D7560
D7561
R7560
Q7560
Q7562
R7561
R7562
R7564
3
E
F
G
H

4.22 MAIN CIRCUIT BOARD

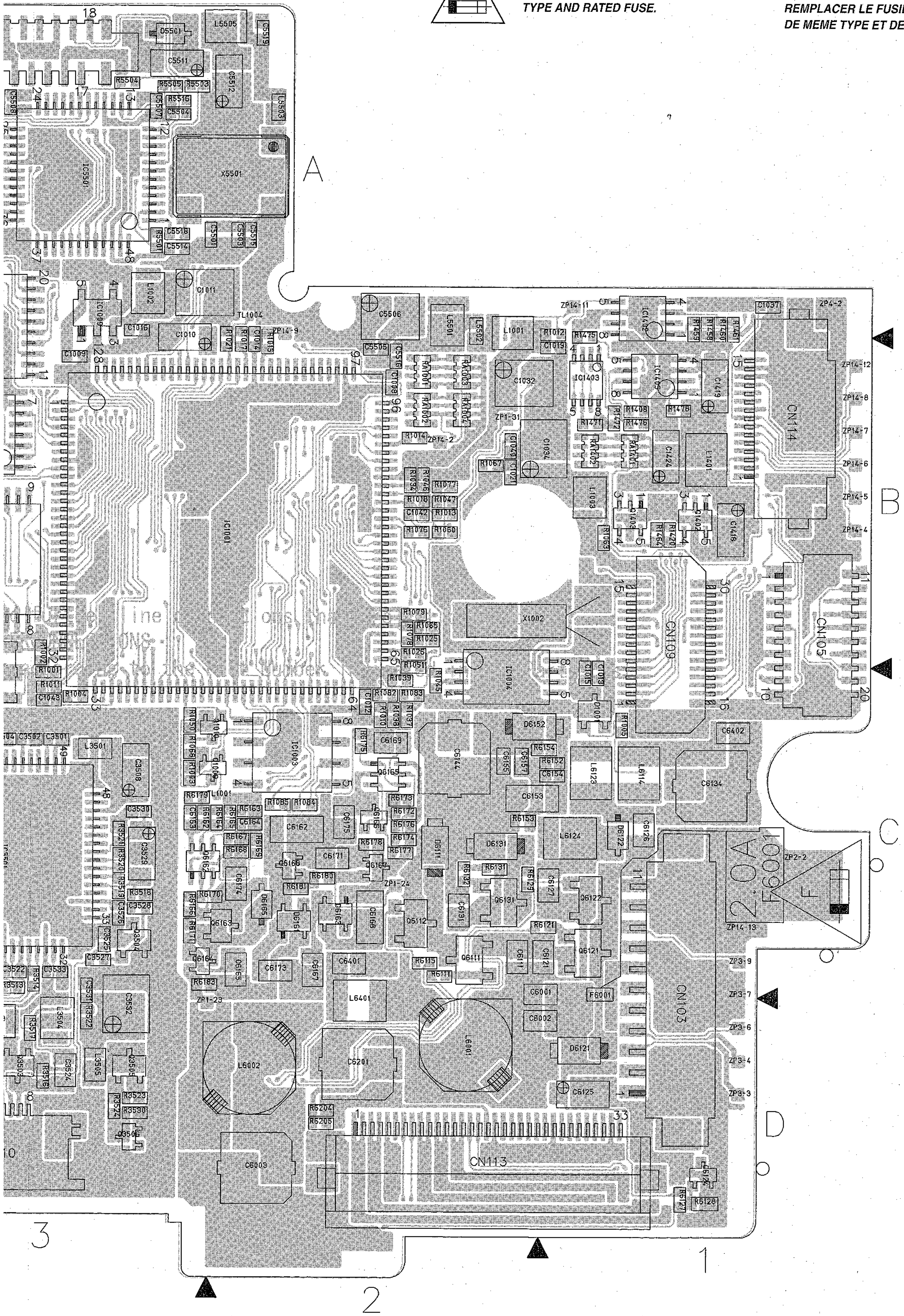
FOIL SIDE


MAIN PWB
YB10277-01-01
CN108
CN104
CN106
CN101
CN110
IC4851
IC2201
IC1302
IC1301
IC1303
IC3501
IC1002
IC1014
5
4
3

SIDE (B)

CAUTION:
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE.

ATTENTION:
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE DÔINCENDE, REMPLACER LE FUSIBLE PAR UN AUTRE DE MEME TYPE ET DE MEME TENSION.


A
B
C
D
1
2
3
IC5501
X5501
IC1001
IC1003
IC1004
IC1401
IC1402
IC1403
X1002
CN113
CN103
CN109
CN105
CN114
L6002
L6101
L6401
C6201
C6003
F6001
2.0A
F6001
ZP14-12
ZP14-8
ZP14-7
ZP14-6
ZP14-5
ZP14-4
ZP14-13
ZP3-9
ZP3-7
ZP3-6
ZP3-4
ZP3-3
ZP2-2
ZP4-2
F

COMPONENT PARTS LOCATION GUIDE (MAIN)

REF.No.	LOCATION		
CAPACITOR			
C1001	B	C	3C
C1002	B	C	3B
C1003	B	C	3A
C1004	B	C	4A
C1008	B	C	2B
C1009	B	C	3B
C1010	B	C	3B
C1011	B	C	3A
C1012	B	C	2C
C1013	B	C	1C
C1014	B	C	2B
C1015	B	C	1C
C1016	B	C	3A
C1017	B	C	4A
C1019	B	C	1B
C1021	B	C	2B
C1022	B	C	4B
C1023	B	C	4B
C1024	B	C	4B
C1026	B	C	4A
C1027	B	C	4A
C1028	B	C	4A
C1031	B	C	4B
C1032	B	C	2B
C1034	B	C	1B
C1035	B	C	3B
C1036	B	C	4A
C1037	B	C	1A
C1038	B	C	3A
C1039	B	C	3A
C1040	B	C	2B
C1041	B	C	4A
C1042	B	C	2B
C1043	B	C	3C
C1301	B	C	3C
C1302	B	C	3B
C1303	B	C	3B
C1304	B	C	3B
C1305	B	C	3B
C1306	B	C	3B
C1307	B	C	4C
C1401	A	C	2B
C1402	A	C	2B
C1411	A	C	2B
C1412	A	C	2B
C1413	A	C	2B
C1414	A	C	2B
C1415	A	C	2B
C1416	A	C	2B
C1417	A	C	2B
C1418	B	C	1B
C1419	B	C	1B
C1420	A	C	3A
C1421	A	C	3A
C1422	A	C	3B
C1423	A	C	3B
C1424	B	C	1B
C1425	A	C	3B
C1601	A	C	1B
C1602	A	C	1B
C1603	A	C	1B
C1605	A	C	1A
C1606	A	C	1B
C1607	A	C	1B
C1610	A	C	1A
C1611	A	C	1A
C1612	A	C	1A
C1613	A	C	1A
C1614	A	C	1C
C1615	A	C	1B
C1616	A	C	1B
C1617	A	C	1B
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C6123	A	C	1C
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C6301	A	C	3D
C6302	A	C	3C
C6401	B	C	2C
C6402	B	C	1C
CONNECTOR			
CN101	B	C	4D
CN102	A	C	4D
CN103	B	C	1D
CN104	B	C	5C
CN105	B	C	1B
CN106	B	C	4D
CN107	B	C	3A
CN108	B	C	5B
CN109	B	C	1C
CN110	B	C	3D
CN111	A	C	5B
CN112	A	C	1D
CN113	B	C	2D
CN114	B	C	1B
DIODE			
D1001	B	C	1C
D1302	B	C	4B
D1303	B	C	4C
D1602	A	C	1C
D1603	A	C	2B
D1604	A	C	1B
D2201	B	C	4C
D2202	B	C	4C
D5501	B	C	3A
D6111	B	C	2C
D6121	B	C	1D
D6122	B	C	1C
D6131	B	C	2C
D6141	A	C	1C
D6151	A	C	2B
D6152	B	C	2C
D6161	B	C	2C
D6163	B	C	2C
D6165	B	C	2C
IC			
IC1001	B	C	2B
IC1002	B	C	3A
IC1003	B	C	2C
IC1004	B	C	2C
IC1009	B	C	3A
IC1010	B	C	4A
IC1012	B	C	3A
IC1014	B	C	3B
IC1015	B	C	4B
IC1301	B	C	4B
IC1302	B	C	3B
IC1303	B	C	4C
IC1401	A	C	2B
IC1402	B	C	1A
IC1403	B	C	1B
IC1405	B	C	1B
IC1601	A	C	1B
IC2201	B	C	5C
IC3001	A	C	4B
IC3002	A	C	4C
IC3004	A	C	3B
IC3005	A	C	4B
IC3007	A	C	3C
IC3101	A	C	5C
IC3201	A	C	2C
IC3202	A	C	4D
IC3203	A	C	3D
IC3301	A	C	4D
IC3501	B	C	3C
IC3701	A	C	5B
IC4201	A	C	4A
IC4202	A	C	5A
IC4301	A	C	3A
IC4302	A	C	3A
IC4303	A	C	3B
IC4802	B	C	5B
IC4803	B	C	5B
IC4804	B	C	5B
IC4805	A	C	5A
IC4851	B	C	4B
IC5501	B	C	3A
IC6001	A	C	2D
IC6301	A	C	3D
COIL			
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L1002	B	C	3A
L1003	B	C	1B
L1401	B	C	1B
L1601	A	C	1B
L1602	A	C	1C
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L4853	B	C	5A
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L5502	B	C	2A
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L6131	A	C	1C
L6141	A	C	1C
L6151	A	C	2C
L6161	A	C	2C
L6202	A	C	1D
L6401	B	C	2D
TRANSISTOR			
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Q1004	B	C	4A
Q1006	B	C	4A
Q1007	B	C	4A
Q1008	B	C	4A
Q1009	B	C	2C
Q1010	B	C	2C
Q1301	B	C	3B
Q1401	A	C	2B
Q1402	B	C	1B
Q1403	B	C	1B
Q1601	A	C	2B
Q2201	B	C	4C
Q2202	B	C	4C
Q2401	B	C	4D
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Q6302	A	C	3D
Q6303	A	C	3D
Q6304	A	C	3D
Q6305	A	C	2C
RESISTOR			
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R1003	B	C	3C
R1004	B	C	3C
R1005	B	C	1C
R1006	B	C	4A
R1007	B	C	3B
R1008	B	C	4A
R1009	B	C	4B
R1010	B	C	2C
R1011	B	C	3C
R1012	B	C	1A
R1013	B	C	2B
R1014	B	C	2B
R1015	B	C	2B
R1016	B	C	4B
R1017	B	C	2B
R1018	B	C	2B
R1021	B	C	2B
R1022	B	C	4A
R1025	B	C	2B
R1026	B	C	2B
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R1035	B	C	4A
R1037	B	C	2C
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R1060	B	C	2B
R1062	B	C	3A
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R1065	B	C	2B
R1066	B	C	4B

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R1074	B	C	3B
R1076	B	C	2B
R1077	B	C	2B
R1078	B	C	2B
R1079	B	C	2B
R1080	B	C	4A
R1081	B	C	4A
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R1083	B	C	2C
R1084	B	C	2C
R1085	B	C	2C
R1302	B	C	4C
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R1310	B	C	3B
R1311	B	C	3C
R1401	B	C	5C
R1408	B	C	1B
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R1412	A	C	2B
R1413	A	C	2B
R1414	A	C	3B
R1415	A	C	2B
R1420	B	C	1B
R1427	A	C	2B
R1428	A	C	2B
R1429	A	C	2B
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R1446	A	C	2A
R1447	A	C	3B
R1450	A	C	3B
R1451	A	C	3B
R1452	A	C	3A
R1453	A	C	3A
R1458	B	C	1A
R1459	B	C	1A
R1460	B	C	1A
R1461	B	C	1A
R1464	B	C	1B
R1465	B	C	5C
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R1469	A	C	3B
R1470	A	C	3B
R1471	B	C	1B
R1472	B	C	1B
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R1641	A	C	1B
R1643	A	C	1A
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R2101	B	C	5C
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R5515	B	C	3A
R5516	B	C	3A
R6001	A	C	2D
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R6010	A	C	3D
R6011	A	C	3D
R6012	A	C	2D
R6111	B	C	2C
R6112	A	C	2C
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R6204	B	C	2D
R6205	B	C	2D
R6206	A	C	2C
R6301	A	C	3D
R6302	A	C	3D
R6303	A	C	3D
R6304	A	C	2D
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RA1401	B	C	1B
RA1402	B	C	1B
RA1403	A	C	2B
RA4301	A	C	4A
RA4302	A	C	4A
RA4303	A	C	4A
RA4304	A	C	3A
RA4305	A	C	3A
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TEST POINT

TP6001	A	C	2D

OTHER

F6001	B	C	1C
F6003	A	C	1C
F6004	A	C	1C
F6005	A	C	2D
TH3201	A	C	3D
TH3301	A	C	4D
TL1001	B	C	2C
TL1004	B	C	2A
TL1006	B	C	4B
TL1007	B	C	4B
TL1008	B	C	3A
TL1009	B	C	3A
TL1401	A	C	2B
TL1402	A	C	2B
TL1403	A	C	2B
TL1404	A	C	3B
TL1405	A	C	3B
TL1406	A	C	3B
TL1407	A	C	2B
TL1408	A	C	3A
TL1409	A	C	3B
TL1410	A	C	3B
TL1411	A	C	2B
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TL1426	A	C	3B
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TL1434	A	C	3C
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TL1602	A	C	1B
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TL1605	A	C	1C
TL1606	A	C	1A
TL1607	A	C	1B
TL1608	A	C	1B
TL1609	A	C	1B
TL1610	A	C	1A
TL1611	A	C	1B
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TL3006	A	C	3B
TL3007	A	C	4B
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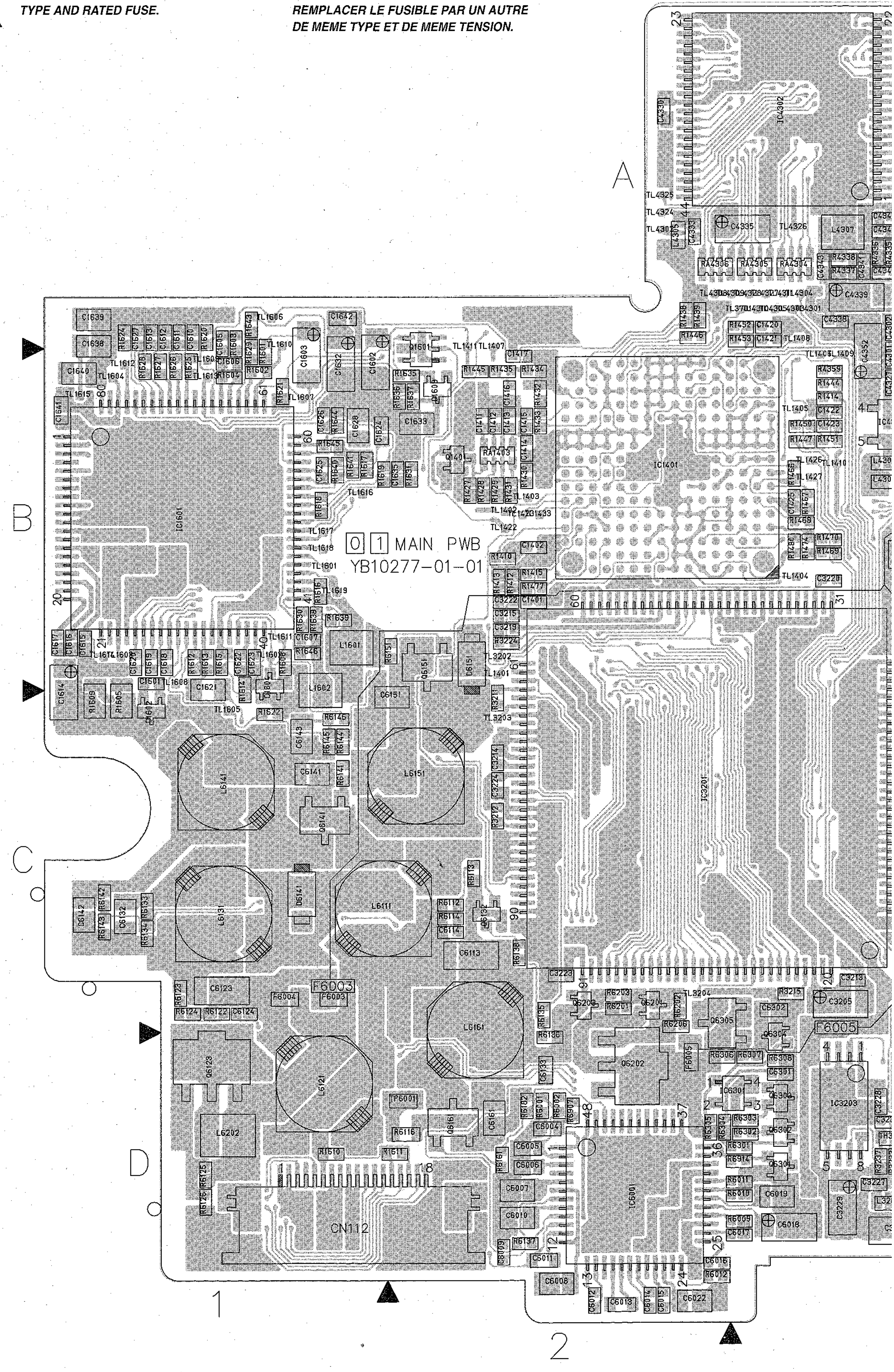
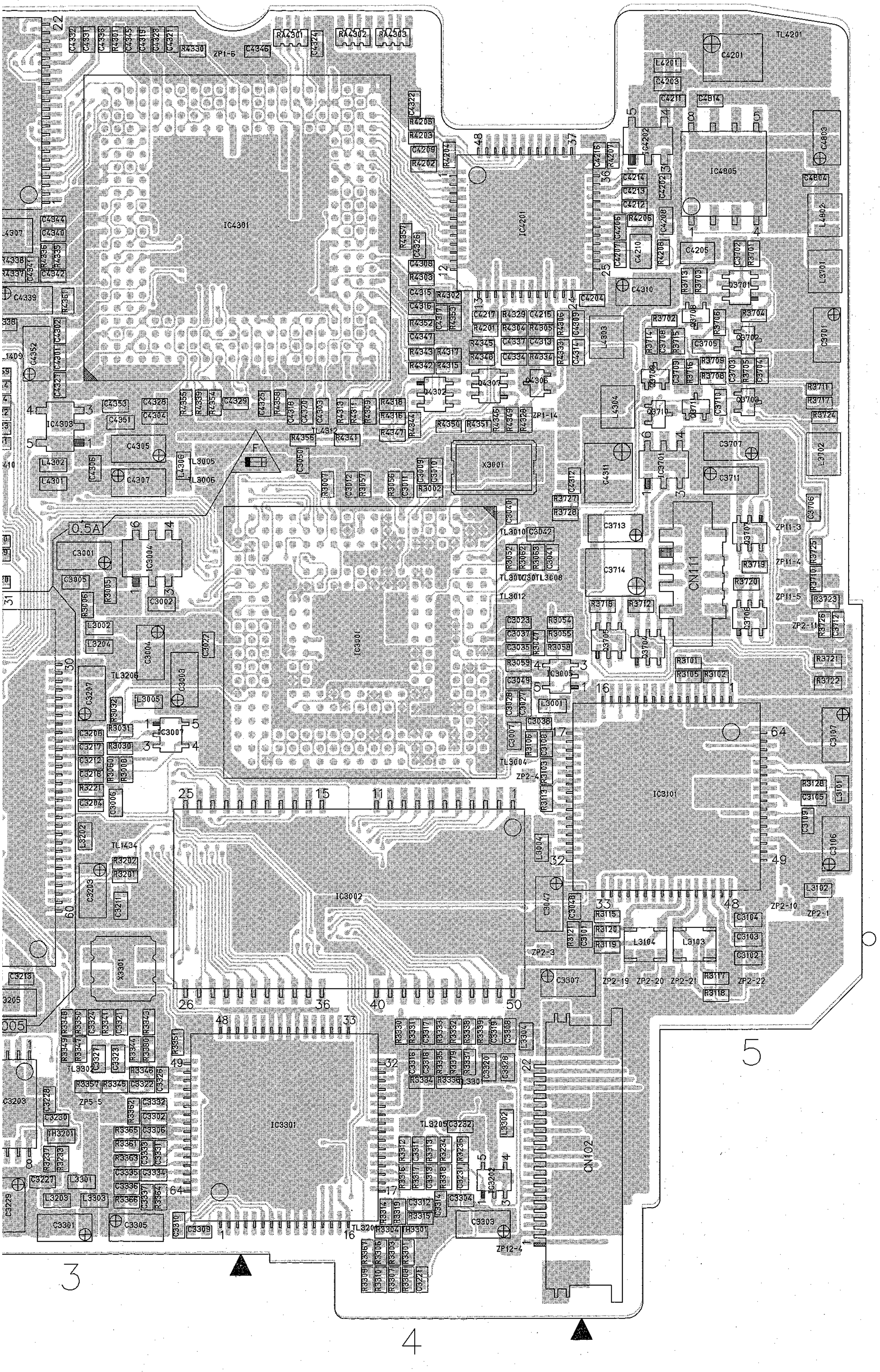
TL4323	B	C	5A
TL4324	A	C	2A
TL4325	A	C	2A
TL4326	A	C	3A
TL4327	A	C	3A
TL4328	A	C	3A
TL4801	B	C	5A
TL5501	B	C	3A
TL5502	B	C	3A
TL5503	B	C	3A
TL5504	B	C	4A
X1001	B	C	3C
X1002	B	C	2B
X3001	A	C	4B
X3301	A	C	3C
X5501	B	C	2A
ZP1-1	B	C	5D
ZP1-2	B	C	5D
ZP1-3	B	C	4D
ZP1-4	B	C	4B
ZP1-5	B	C	4B
ZP1-6	A	C	3A
ZP1-9	B	C	4D
ZP2-1	A	C	5C
ZP2-2	B	C	1C
ZP2-3	A	C	4C
ZP2-4	A	C	4C
ZP2-5	B	C	4B
ZP2-9	B	C	4B
ZP3-3	B	C	1D
ZP3-4	B	C	1D
ZP3-6	B	C	1D
ZP3-7	B	C	1C
ZP3-9	B	C	1C
ZP4-1	B	C	5C
ZP4-2	B	C	1A
ZP5-5	A	C	3D
ZP6-1	B	C	4D
ZP6-2	B	C	4D
ZP6-3	B	C	4D
ZP1-10	B	C	4D
ZP1-11	B	C	5C
ZP11-3	A	C	5B
ZP1-14	A	C	4B
ZP11-4	A	C	5B
ZP11-5	A	C	5B
ZP1-16	B	C	4D
ZP11-6	B	C	4D
ZP1-23	B	C	2D
ZP1-24	B	C	2C
ZP12-4	A	C	4D
ZP1-31	B	C	2B
ZP1-32	B	C	4B
ZP14-2	B	C	2B
ZP14-4	B	C	1B
ZP14-5	B	C	1B
ZP14-6	B	C	1B
ZP14-7	B	C	1B
ZP14-8	B	C	1B
ZP14-9	B	C	2A
ZP2-10	A	C	5C
ZP2-11	A	C	5B
ZP2-12	B	C	4D
ZP2-19	A	C	5C
ZP2-20	A	C	5C
ZP2-21	A	C	5C
ZP2-22	A	C	5C
ZP3-10	B	C	4B
ZP5-20	B	C	4C
ZP14-10	B	C	4A
ZP14-11	B	C	1A
ZP14-12	B	C	1B
ZP14-13	B	C	1C
ZP14-15	B	C	4B

CAUTION:
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE.

ATTENTION:
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE DÕINCENDE, REMPLACER LE FUSIBLE PAR UN AUTRE DE MEME TYPE ET DE MEME TENSION.


A
B
C
D
1
2
01 MAIN PWB
YB10277-01-01
IC1601
IC1401
IC3201
IC4302
IC6001
IC3203
CN112
L6141
L6151
L6131
L6111
L6121
L6161
L6202
F6003
F6005
Q6123
Q6202
Q6141
Q6151
Q6161

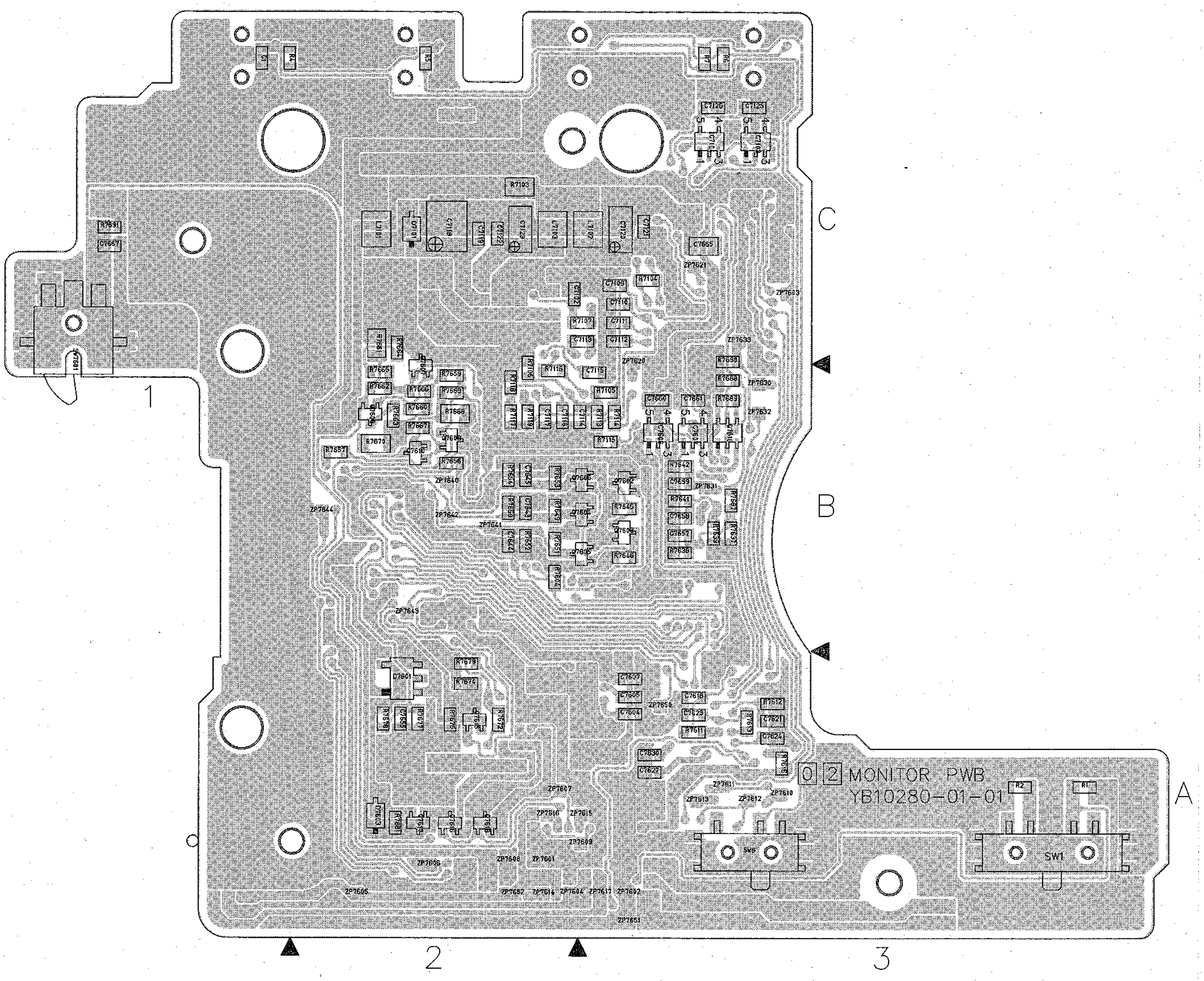
NENT SIDE (A)



IC4301
IC4201
IC4805
IC4202
IC4303
IC3004
IC3001
IC3002
IC3101
IC3301
IC3701
IC3005
IC3007
IC3202
X3001
X3301
CN111
CN102
C4201
C4310
C4311
C3707
C3711
C3713
C3714
C3701
C3107
C3106
C3307
C3303
C3301
C3305
C3001
C3004
C3003
C3207
C3203
C4305
C4307
L4303
L4304
L3701
L3702
L4802
L3104
L3103
Q3701
Q3702
Q3703
Q4302
Q4307
Q4306
TL4201
TL3005
TL3006
F
0.5A
ZP1-6
ZP1-14
ZP2-3
ZP2-4
ZP2-10
ZP2-19
ZP2-20
ZP2-21
ZP2-22
ZP12-4
ZP5-5
3
4
5

4.23 MONITOR CIRCUIT BOARD

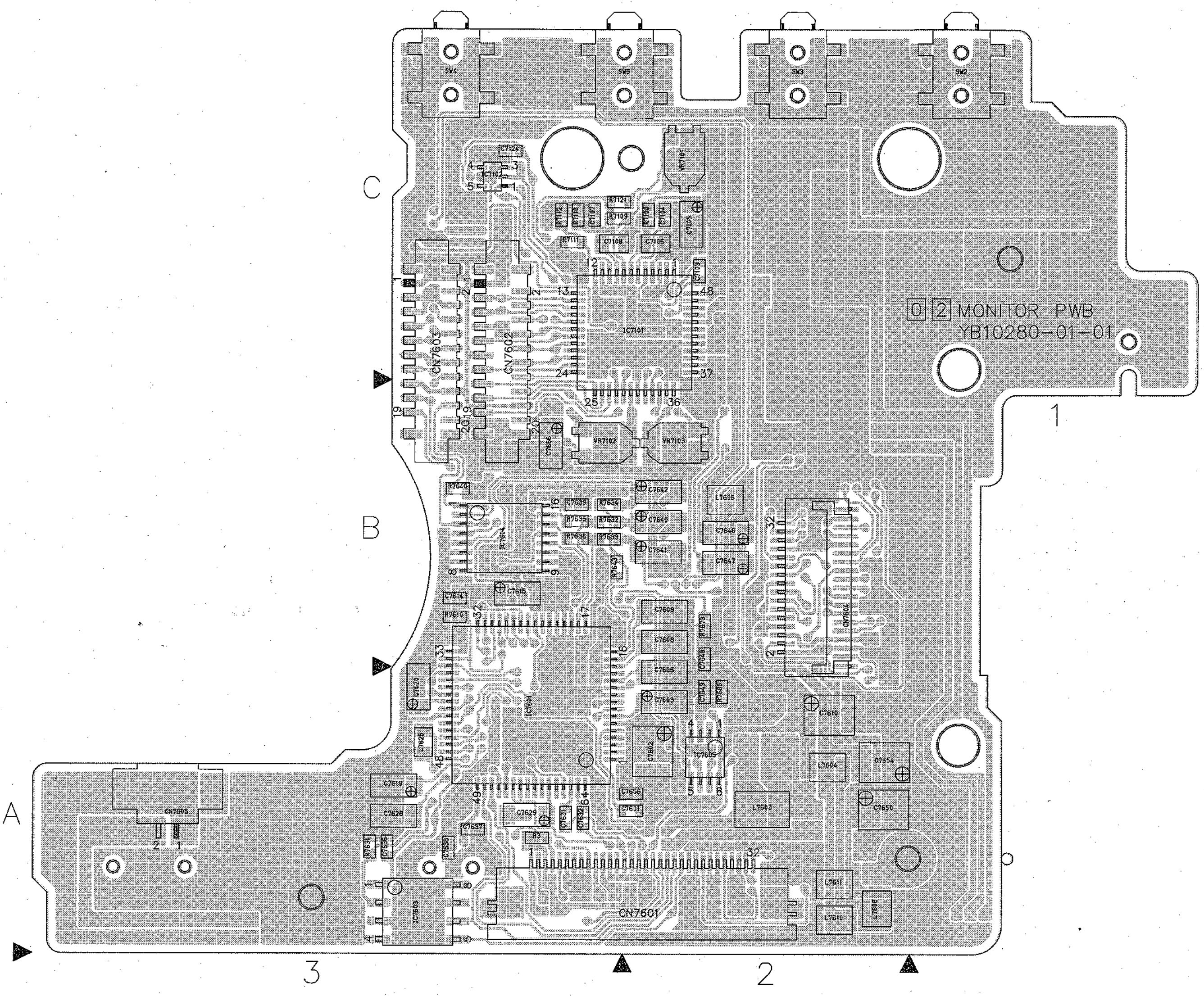
FOIL SIDE (B)



COMPONENT PARTS LOCATION GUIDE (MONITOR)

REF.No.	LOCATION		
CAPACITOR			
C1	B	C	1C
C7102	B	C	3C
C7103	A	C	2C
C7104	A	C	2C
C7105	A	C	2C
C7106	A	C	2C
C7107	A	C	3C
C7108	A	C	3C
C7109	B	C	3C
C7110	B	C	3C
C7111	B	C	3C
C7112	B	C	3C
C7113	B	C	3C
C7114	B	C	3B
C7115	B	C	3B
C7116	B	C	2B
C7117	B	C	2B
C7118	B	C	2C
C7119	B	C	2C
C7120	B	C	3C
C7121	B	C	3C
C7122	B	C	2C
C7123	B	C	2C
C7124	A	C	3C
C7125	B	C	3C
C7126	B	C	3C
C7601	A	C	3A
C7602	A	C	2A
C7603	A	C	2A
C7604	B	C	3A
C7605	B	C	3A
C7606	A	C	2A
C7607	B	C	3A
C7608	A	C	2B
C7609	A	C	2B
C7610	A	C	2A
C7614	A	C	3B
C7615	A	C	3B
C7618	B	C	3A
C7619	A	C	3A
C7620	A	C	3A
C7621	B	C	3A
C7623	B	C	3A
C7624	B	C	3A
C7625	A	C	3A
C7627	B	C	3A
C7628	A	C	3A
C7629	A	C	3A
C7630	B	C	3A
C7631	A	C	3A
C7632	A	C	3A
C7636	A	C	3A
C7637	A	C	3A
C7638	A	C	3A
C7639	A	C	3B
C7640	A	C	2B
C7641	A	C	2B
C7642	A	C	2B
C7643	B	C	2B
C7644	B	C	2B
C7645	B	C	2B
C7646	A	C	2B
C7647	A	C	2B
C7648	A	C	2B
C7649	A	C	2A
C7650	A	C	2A
C7654	A	C	2A
C7655	B	C	2A
C7656	A	C	3A
C7657	B	C	3B
C7658	B	C	3B
C7659	B	C	3B
C7660	B	C	3B
C7661	B	C	3B
C7665	B	C	3C
C7666	A	C	3B
C7667	B	C	1C
CONNECTOR			
CN7601	A	C	3A
CN7602	A	C	3C
CN7603	A	C	3C
CN7604	A	C	2B
DIODE			
D7101	B	C	2C
D7601	B	C	2A
D7603	B	C	2A
IC			
IC7101	A	C	2C
IC7102	A	C	3C
IC7103	B	C	3C
IC7104	B	C	3C
IC7601	A	C	3A
IC7603	A	C	3A
IC7604	A	C	3B
IC7605	A	C	2A
IC7606	B	C	3B
IC7607	B	C	3B
COIL			
L7101	B	C	2C
L7102	B	C	3C
L7103	B	C	2C
L7603	A	C	2A
L7604	A	C	2A
L7605	A	C	2B
L7608	A	C	2A
L7610	A	C	2A
L7611	A	C	2A
TRAN			
Q7602			
Q7603			
Q7604			
Q7605			
Q7606			
Q7607			
Q7608			
Q7609			
Q7610			
Q7615			
Q7616			
Q7617			
Q7618			
Q7619			
RESI			
R1			
R2			
R3			
R4			
R5			
R6			
R7			
R7103			
R7104			
R7105			
R7106			

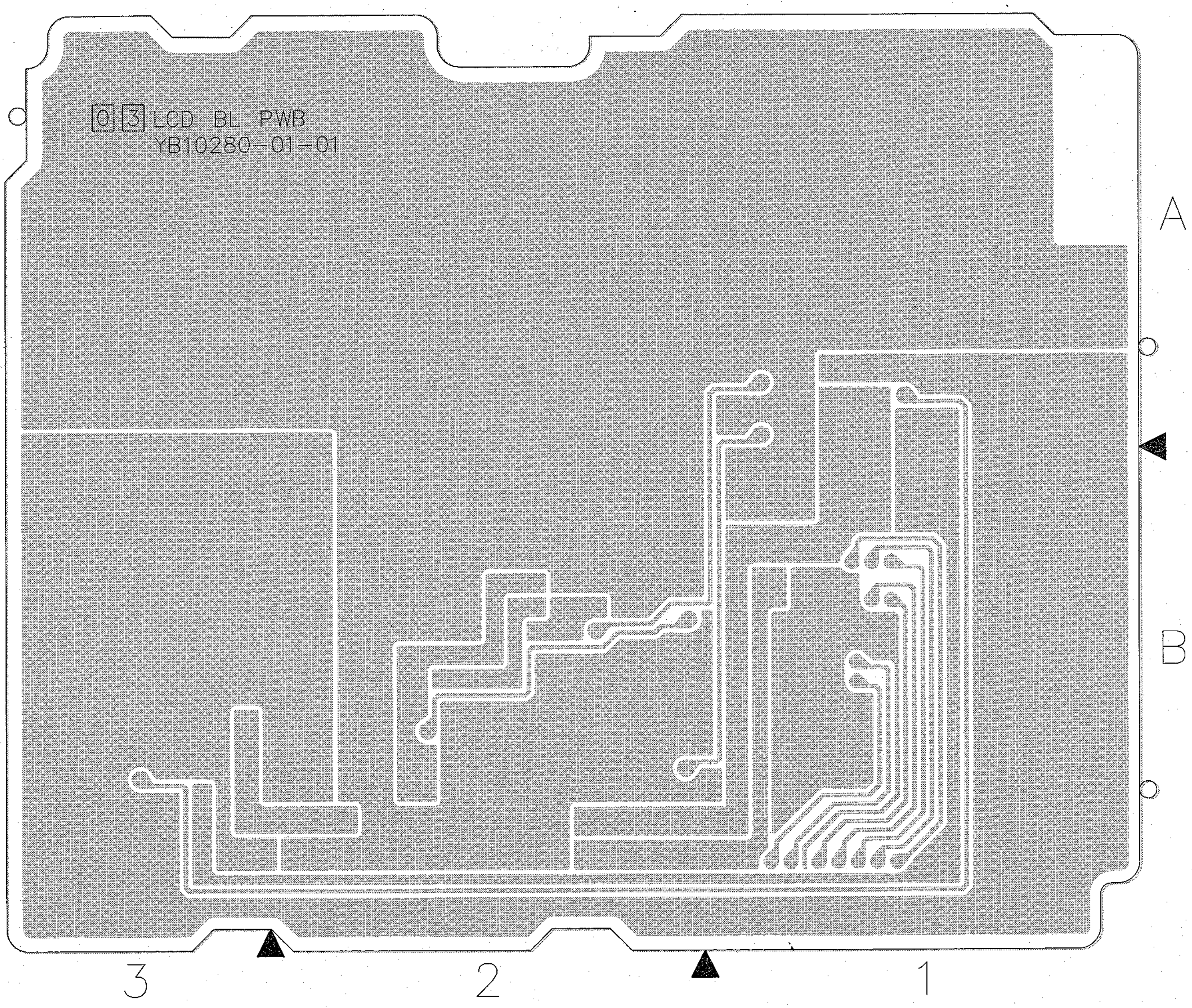
COMPONENT SIDE (A)



REF.No.	LOCATION		
TRANSISTOR			
Q7602	B	C	3B
Q7603	B	C	3B
Q7604	B	C	3B
Q7605	B	C	3B
Q7606	B	C	3B
Q7607	B	C	2B
Q7608	B	C	2B
Q7609	B	C	2B
Q7610	B	C	2B
Q7615	B	C	2A
Q7616	B	C	2A
Q7617	B	C	2A
Q7618	B	C	2A
Q7619	B	C	3B
RESISTOR			
R1	B	C	3A
R2	B	C	3A
R3	A	C	3A
R4	B	C	2C
R5	B	C	2C
R6	B	C	3C
R7	B	C	3C
R7103	B	C	2C
R7104	B	C	3C
R7105	B	C	3B
R7106	B	C	2B
R7107	B	C	3C
R7108	A	C	2C
R7109	A	C	3C
R7110	A	C	3C
R7111	A	C	3C
R7112	A	C	3C
R7113	B	C	3B
R7114	B	C	3B
R7115	B	C	3B
R7116	B	C	2B
R7117	B	C	2B
R7118	B	C	2B
R7119	B	C	2B
R7121	A	C	3C
R7604	B	C	2B
R7610	A	C	3B
R7611	B	C	3A
R7612	B	C	3A
R7613	B	C	3A
R7616	B	C	3A
R7631	A	C	3A
R7632	A	C	3B
R7633	A	C	3B
R7634	A	C	3B
R7635	A	C	3B
R7636	A	C	3B
R7637	B	C	3B
R7638	B	C	3B
R7639	B	C	3B
R7640	A	C	3B
R7641	B	C	3B
R7642	B	C	3B
R7643	A	C	3B
R7645	B	C	3B
R7646	B	C	3B
R7649	B	C	2B
R7650	B	C	2B
R7651	B	C	2B
R7652	B	C	2B
R7653	B	C	2B
R7654	B	C	2B
R7656	B	C	2B
R7657	B	C	2B
R7659	B	C	2B
R7660	B	C	2B
R7661	B	C	2C
R7662	B	C	2B
R7663	B	C	2B
R7664	B	C	2C
R7665	B	C	2B
R7666	B	C	2B
R7667	B	C	2B
R7668	B	C	2B
R7669	B	C	2B
R7670	B	C	2B
R7672	B	C	2A
R7673	A	C	2B
R7674	B	C	2A
R7675	B	C	2A
R7677	B	C	2A
R7678	B	C	2A
R7679	B	C	2A
R7681	B	C	2A
R7685	A	C	2A
R7687	B	C	3B
R7688	B	C	3B
R7689	B	C	3B
R7690	B	C	3C
R7691	B	C	1C
VR7101	A	C	2C
VR7102	A	C	3B
VR7103	A	C	2B
OTHER			
SW1	B	C	3A
SW2	A	C	1C
SW3	A	C	2C
SW4	A	C	3C
SW5	A	C	3C
SW6	B	C	3A
SW7601	B	C	1C
ZP7601	B	C	2A
ZP7602	B	C	3A
ZP7603	B	C	3C
ZP7604	B	C	3A
ZP7605	B	C	2A
ZP7606	B	C	2A
ZP7607	B	C	2A
ZP7608	B	C	2A
ZP7609	B	C	3A
ZP7610	B	C	3A
ZP7611	B	C	3A
ZP7612	B	C	3A
ZP7613	B	C	3A
ZP7614	B	C	2A
ZP7615	B	C	3A
ZP7616	B	C	2A
ZP7617	B	C	3A
ZP7620	B	C	3C
ZP7621	B	C	3C
ZP7630	B	C	3B
ZP7631	B	C	3B
ZP7632	B	C	3B
ZP7633	B	C	3C
ZP7640	B	C	2B
ZP7641	B	C	2B
ZP7642	B	C	2B
ZP7643	B	C	2B
ZP7644	B	C	2B
ZP7650	B	C	3A
ZP7651	B	C	3A
ZP7652	B	C	2A

4.24 LCD BL CIRCUIT BOARD

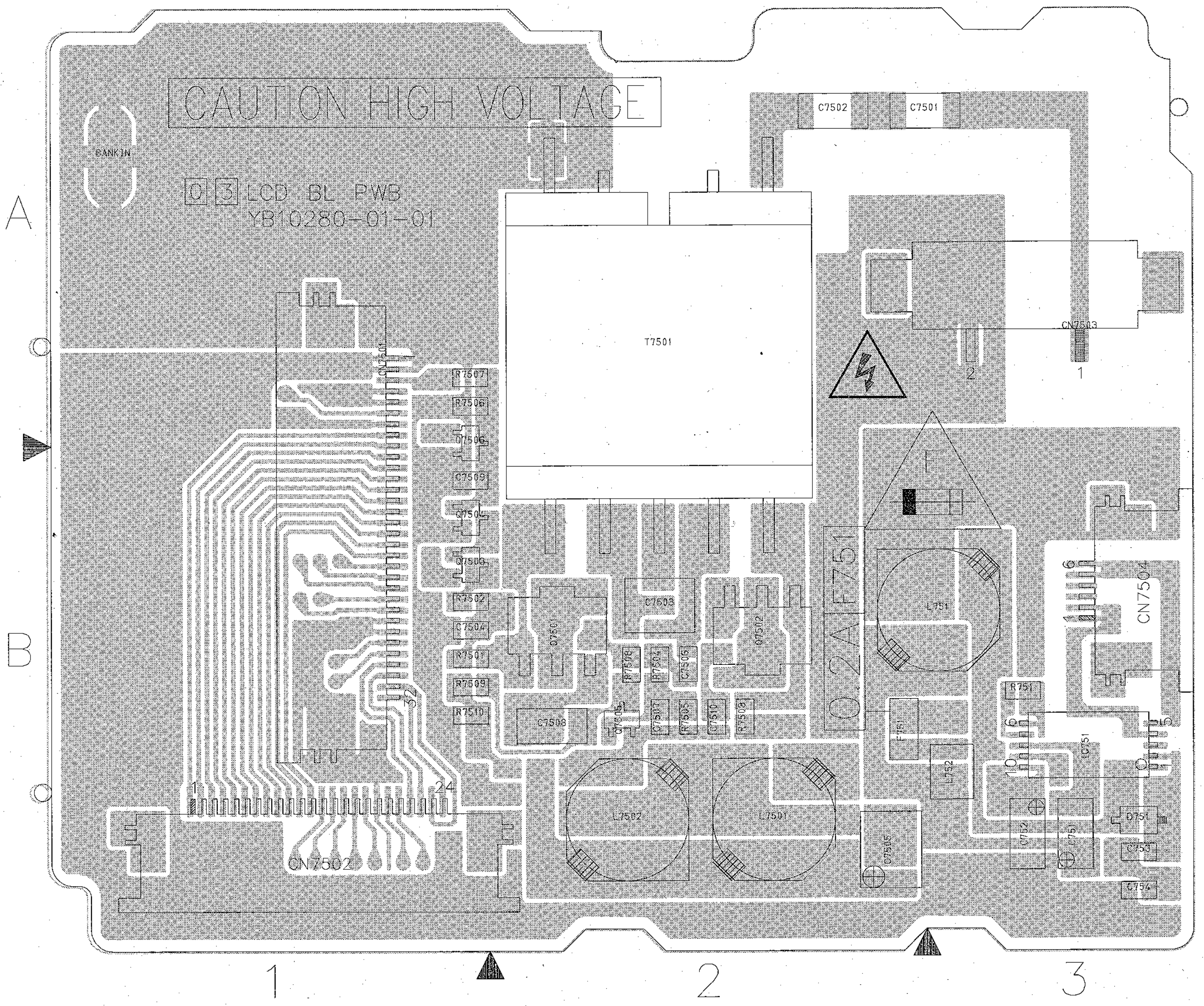
FOIL SIDE (B)



COMPONENT PARTS LOCATION GUIDE (L

REF.No.	LOCATION			REF.No.	LOCATION			REF.No.	LO
CAPACITOR				C7509	A	C	1B	IC	
C751	A	C	3B	C7510	A	C	2B	IC751	A
C752	A	C	3B	CONNECTOR				CO	
C753	A	C	3B						
C754	A	C	3B	CN7501	A	C	1A	L751	A
C7501	A	C	3A	CN7502	A	C	1B	L752	A
C7502	A	C	2A	CN7503	A	C	3A	L7501	A
C7503	A	C	2B	CN7504	A	C	3B	L7502	A
C7504	A	C	1B						
C7505	A	C	2B	DIODE				TRANSI	
C7506	A	C	2B	D751	A	C	3B	Q7501	A
C7507	A	C	2B					Q7502	A
C7508	A	C	2B					Q7503	A

COMPONENT SIDE (A)


CAUTION HIGH VOLTAGE
RANKIN
03 LCD BL PWB
YB10280-01-01
A
B
1
2
3
C7502
C7501
T7501
CN7503
CN7501
CN7502
CN7504
R7507
R7506
Q7506
C7509
Q7504
Q7503
R7502
C7504
R7501
R7509
R7510
C7508
Q7501
Q7502
C7503
R7508
R7504
C7505
Q7505
C7510
R7503
R7505
F
0.2A F751
L751
L752
L7501
L7502
R751
IC751
F751
C752
C751
D751
C753
C754
6
5
10
1
2
24
32

F

CAUTION:
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE.

ATTENTION:
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE DÕINCENDE, REMPLACER LE FUSIBLE PAR UN AUTRE DE MEME TYPE ET DE MEME TENSION.

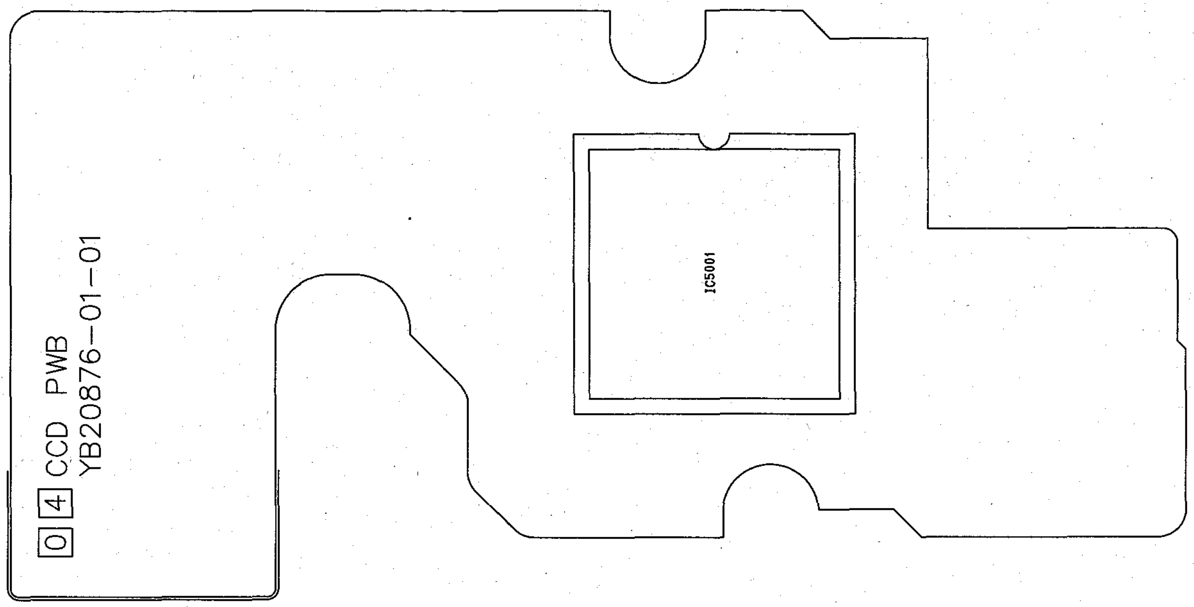
UIDE (LCD BL)

REF.No.	LOCATION		
IC			
751	A	C	3B
COIL			
51	A	C	3B
52	A	C	3B
501	A	C	2B
502	A	C	2B
TRANSISTOR			
501	A	C	2B
502	A	C	2B
503	A	C	1B
Q7504	A	C	1B
Q7505	A	C	2B
Q7506	A	C	1A
RESISTOR			
R751	A	C	3B
R7501	A	C	1B
R7502	A	C	1B
R7503	A	C	2B
R7504	A	C	2B
R7505	A	C	2B
R7506	A	C	1A
R7507	A	C	1A
R7508	A	C	2B
R7509	A	C	1B
R7510	A	C	1B
OTHER			
T7501	A	C	2A
F751	A	C	2B

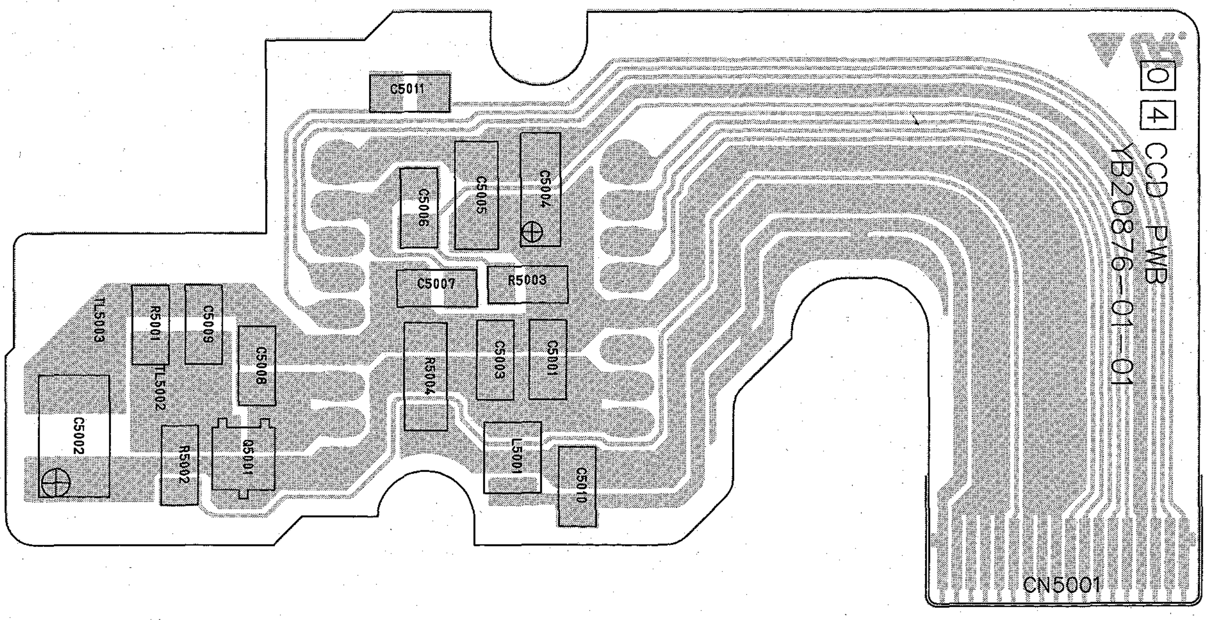
4.25 CCD AND JUNCTION CIRCUIT BOARDS

— CCD —

FOIL SIDE (B)

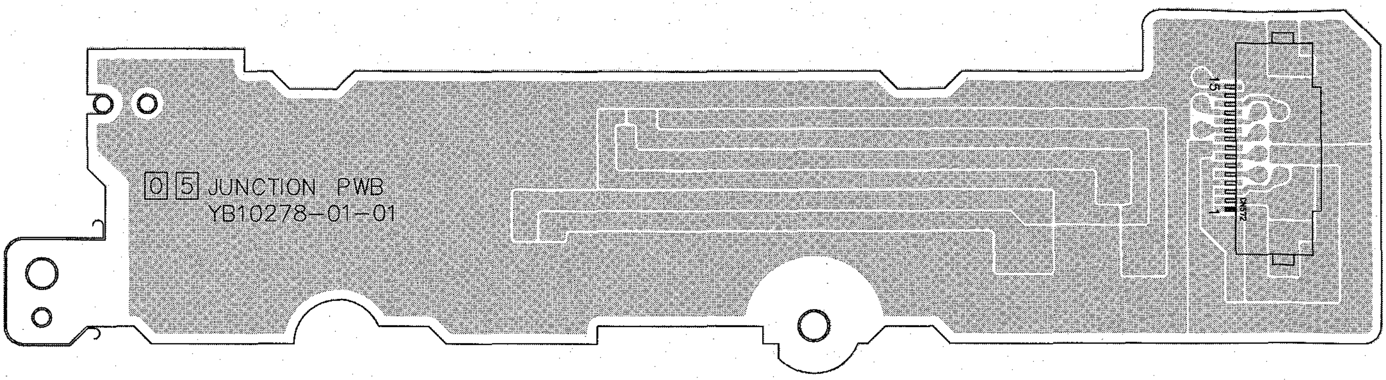

0 4 CCD PWB
YB20876-01-01
IC5001

COMPONENT SIDE (A)

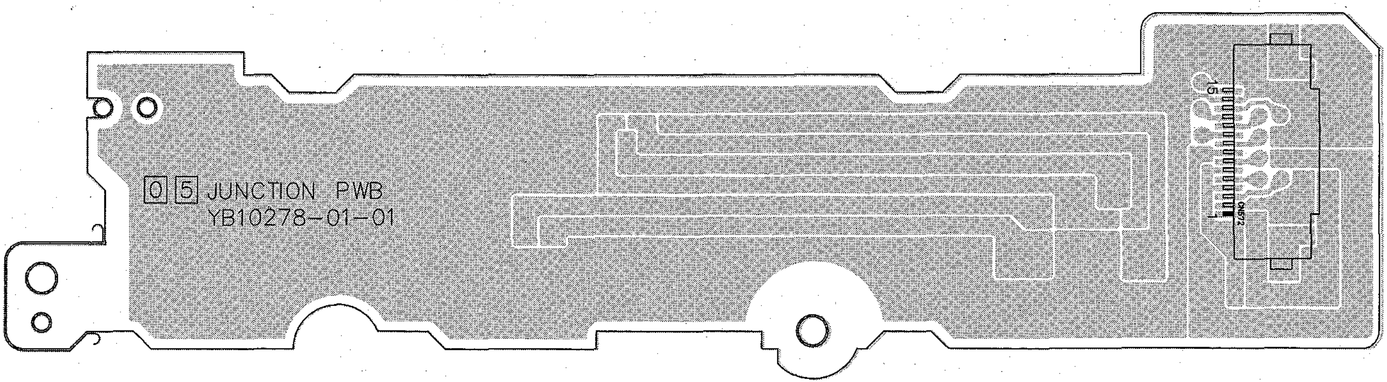

0 4 CCD PWB
YB20876-01-01
C5011
C5006
C5005
C5004
C5007
R5003
TL5003
R5001
C5009
C5008
TL5002
R5004
C5003
C5001
C5002
R5002
Q5001
L5001
C5010
CN5001

— JUNCTION —

FOIL SIDE (B)


0 5 JUNCTION PWB
YB10278-01-01
15
1
CN572

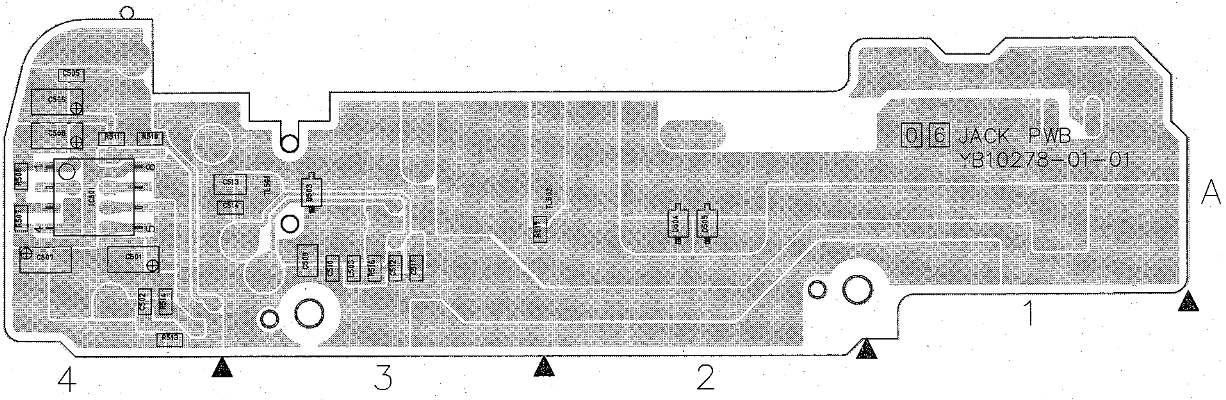
COMPONENT SIDE (A)


0 5 JUNCTION PWB
YB10278-01-01
15
1
CN572

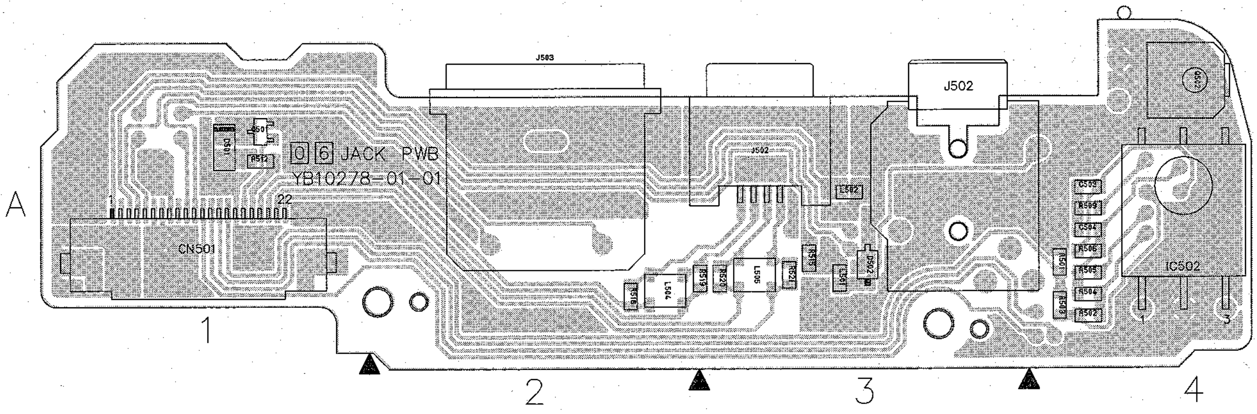
4.26 JACK, REAR AND B/W VF CIRCUIT BOARDS

— JACK —

FOIL SIDE (B)


C505
C506
C508
R511
R510
R508
IC501
R507
C507
C501
C502
R514
R513
C513
C514
TL501
D503
C509
C510
C508
R516
C512
C511
TL502
R517
D504
D505
0 6 JACK PWB
YB10278-01-01
A
1
2
3
4

COMPONENT SIDE (A)

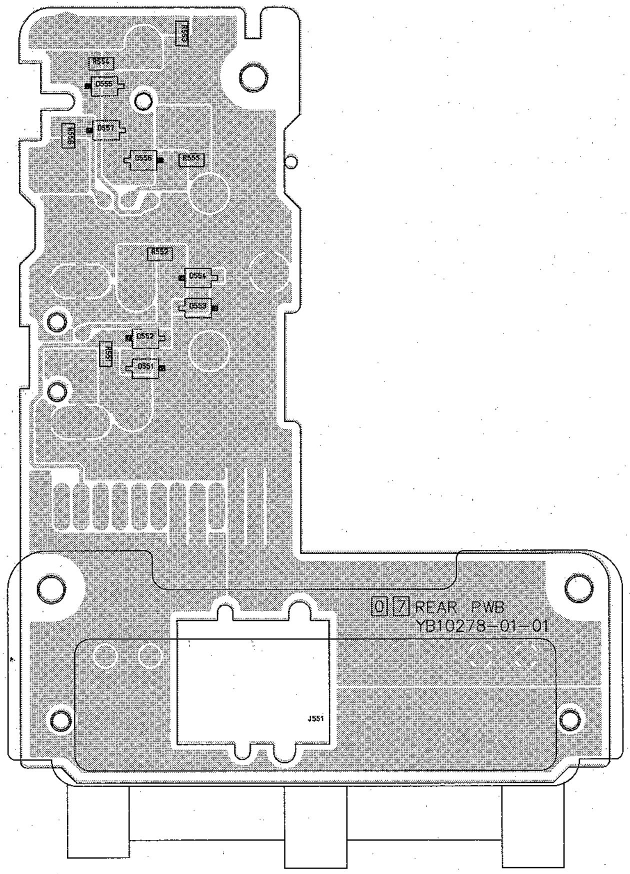

J503
J502
J502
Q502
R513
D501
R512
0 6 JACK PWB
YB10278-01-01
1
22
CN501
A
L502
R515
D502
L501
R516
L504
R519
R520
L505
R521
C503
R509
C504
R506
R501
R505
R504
R503
R502
IC502
1
3
1
2
3
4

COMPONENT PARTS LOCATION GUIDE (JACK)

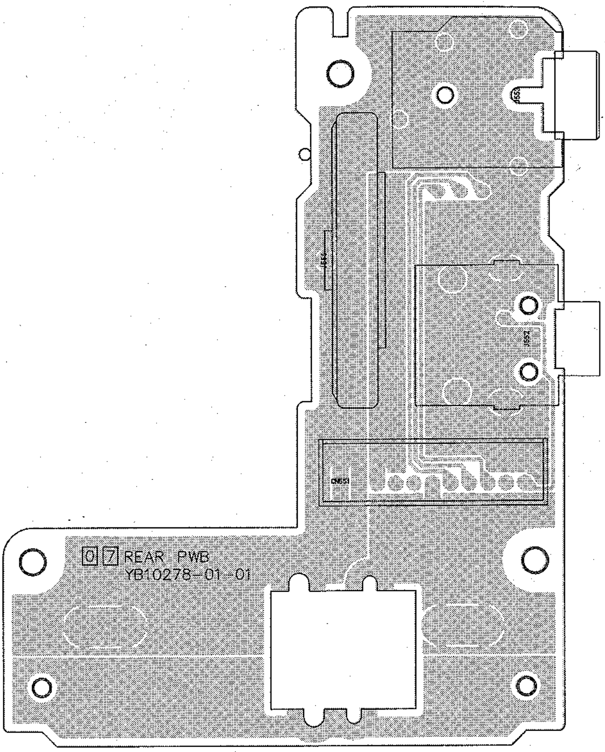
REF.No.	LOCATION		
CAPACITOR			
C501	B	C	4A
C502	B	C	4A
C503	A	C	4A
C504	A	C	4A
C505	B	C	4A
C506	B	C	4A
C507	B	C	4A
C508	B	C	4A
C509	B	C	3A
C510	B	C	3A
C511	B	C	3A
C512	B	C	3A
C513	B	C	3A
C514	B	C	3A
CONNECTOR			
CN501	A	C	1A
DIODE			
D501	A	C	1A
D502	A	C	3A
D503	B	C	3A
D504	B	C	2A
D505	B	C	2A
IC			
IC501	B	C	4A
IC502	A	D	4A
COIL			
L501	A	C	3A
L502	A	C	3A
L503	B	C	3A
L504	A	C	2A
L505	A	C	3A
TRANSISTOR			
Q501	A	C	1A
Q502	A	D	4A
RESISTOR			
R501	A	C	4A
R502	A	C	4A
R503	A	C	4A
R504	A	C	4A
R505	A	C	4A
R506	A	C	4A
R507	B	C	4A
R508	B	C	4A
R509	A	C	4A
R510	B	C	4A
R511	B	C	4A
R512	A	C	1A
R513	B	C	4A
R514	B	C	4A
R515	A	C	3A
R516	B	C	3A
R517	B	C	3A
R518	A	C	2A
R519	A	C	3A
R520	A	C	3A
R521	A	C	3A
OTHER			
J501	A	D	3A
J502	A	C	3A
J503	A	D	2A
TL501	B	C	3A
TL502	B	C	2A

— REAR —

FOIL SIDE (B)

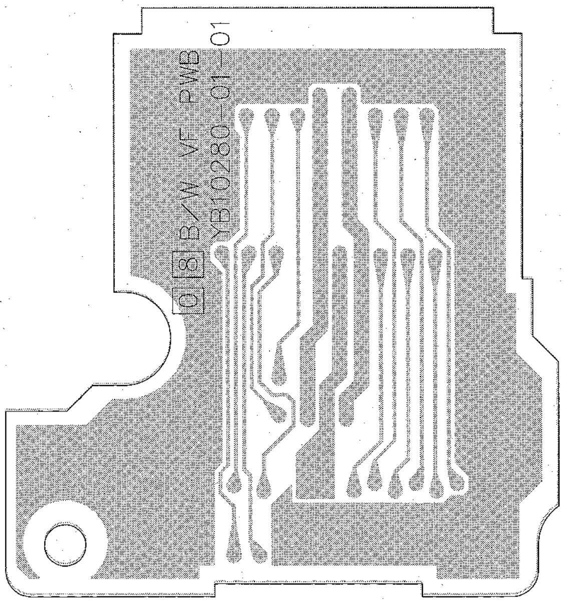

R554
D555
D557
D556
R555
R553
D554
D553
D552
D551
07 REAR PWB
YB10278-01-01
J551

COMPONENT SIDE (A)

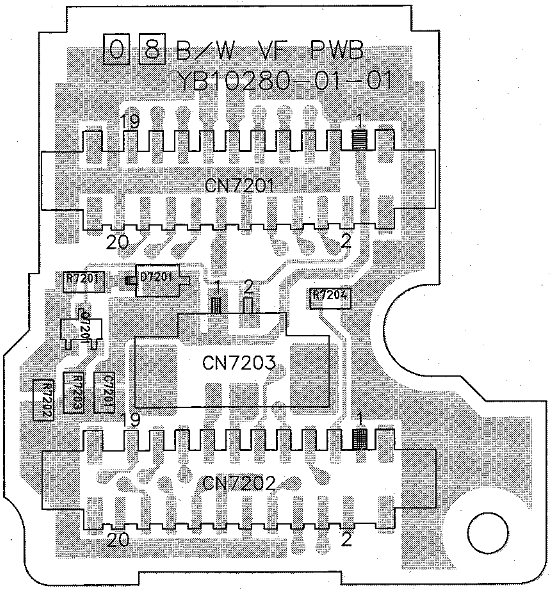

CN551
07 REAR PWB
YB10278-01-01

— B/W VF —

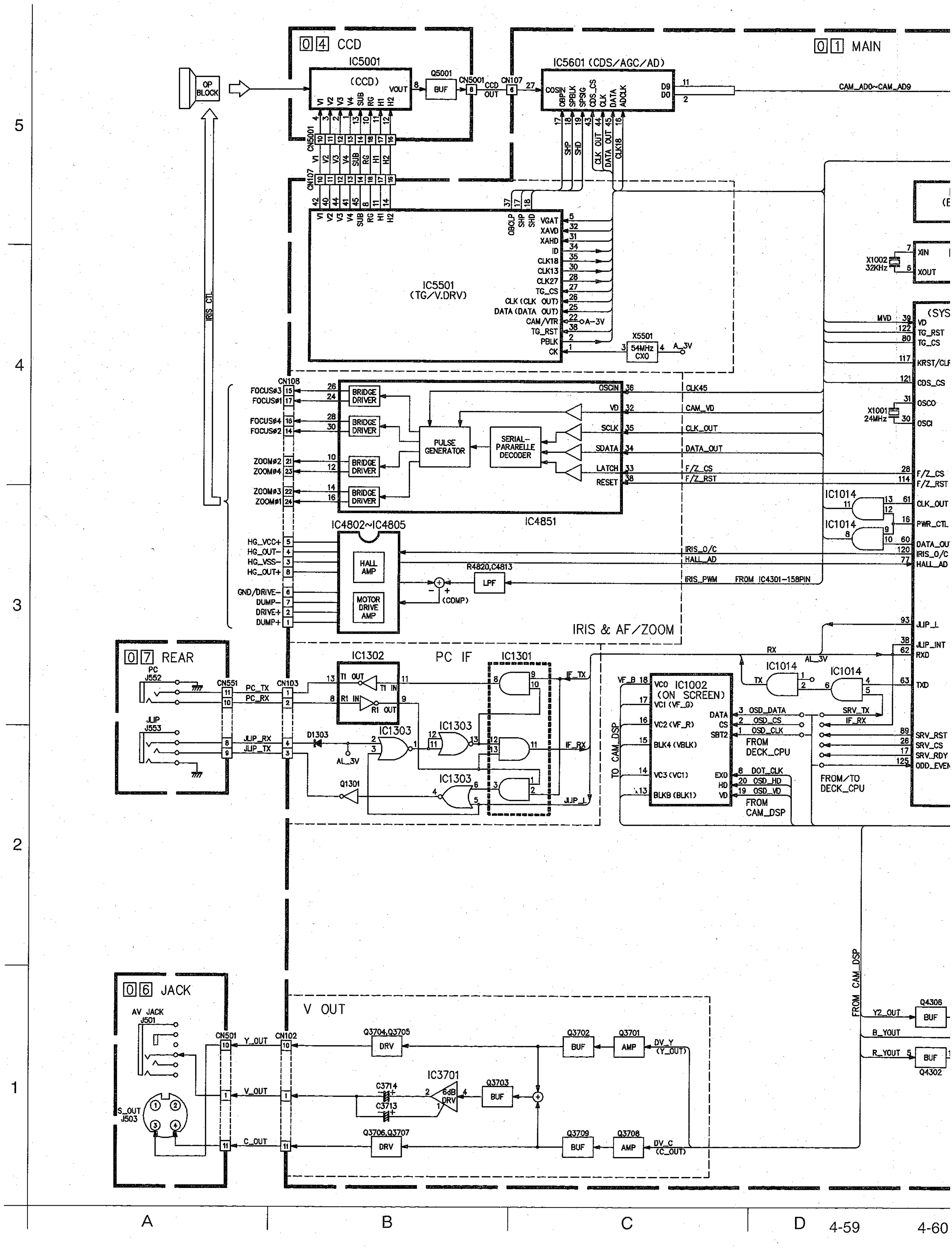
FOIL SIDE (B)

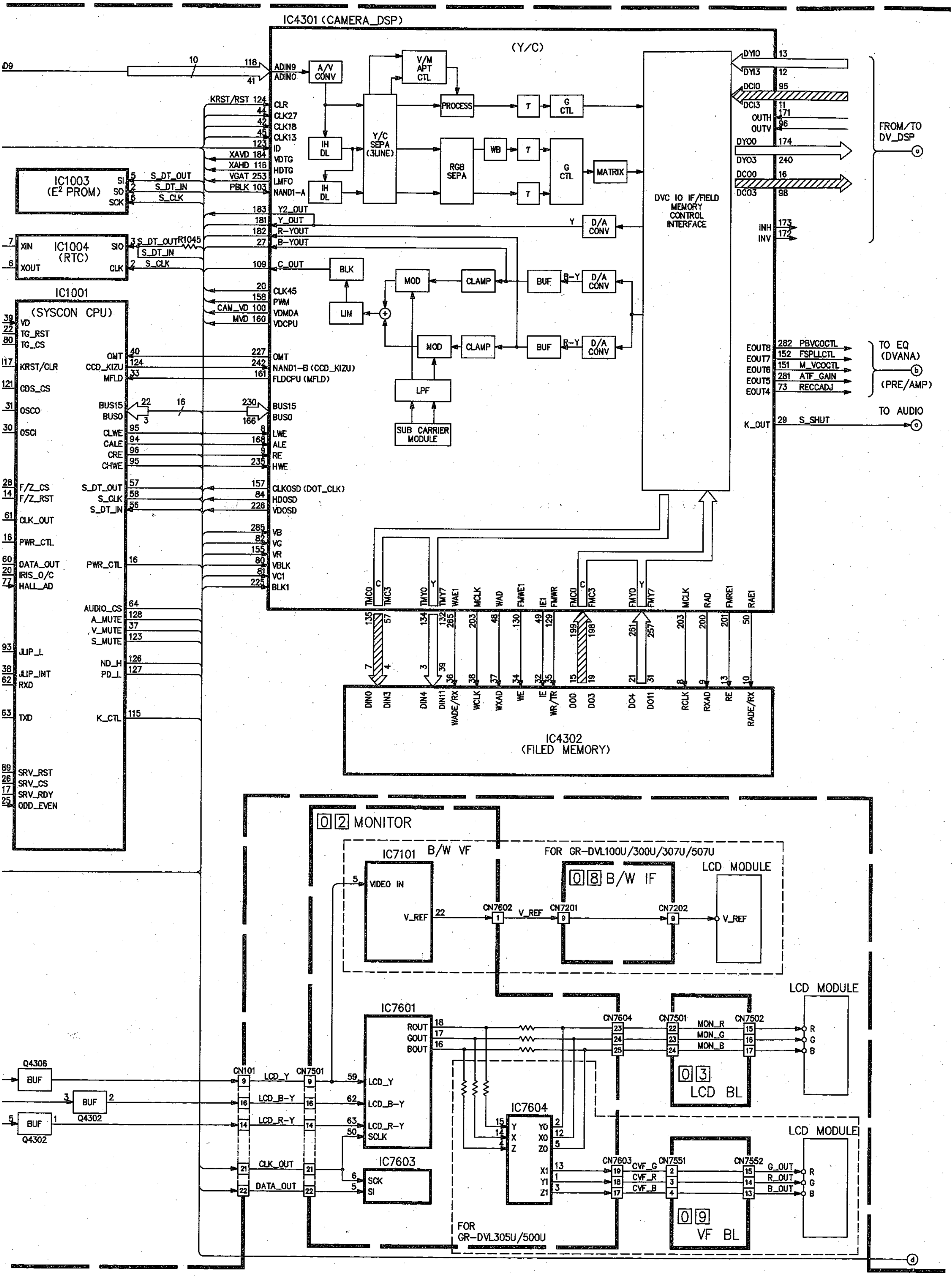

08 B/W VF PWB
YB10280-01-01

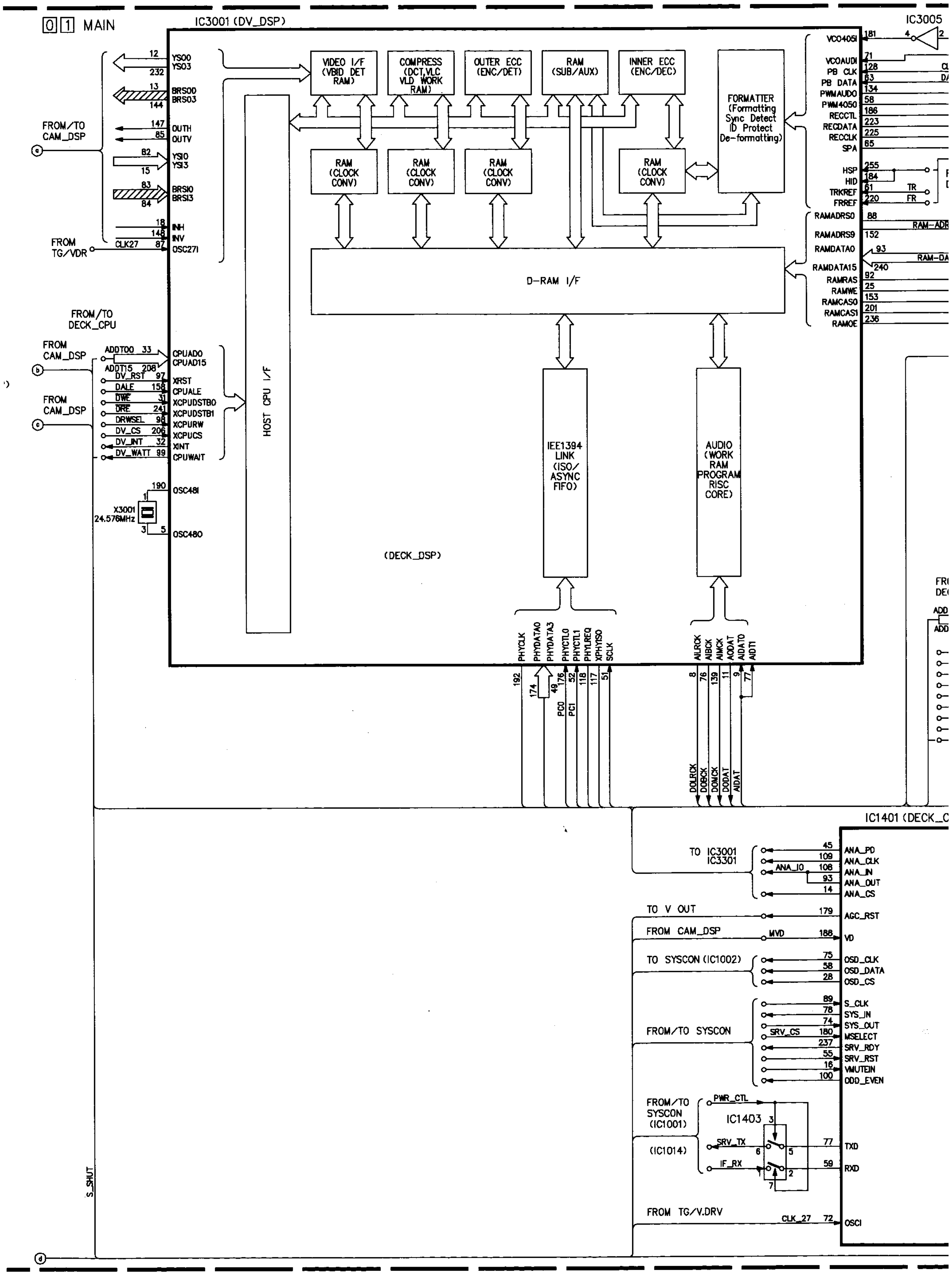
COMPONENT SIDE (A)

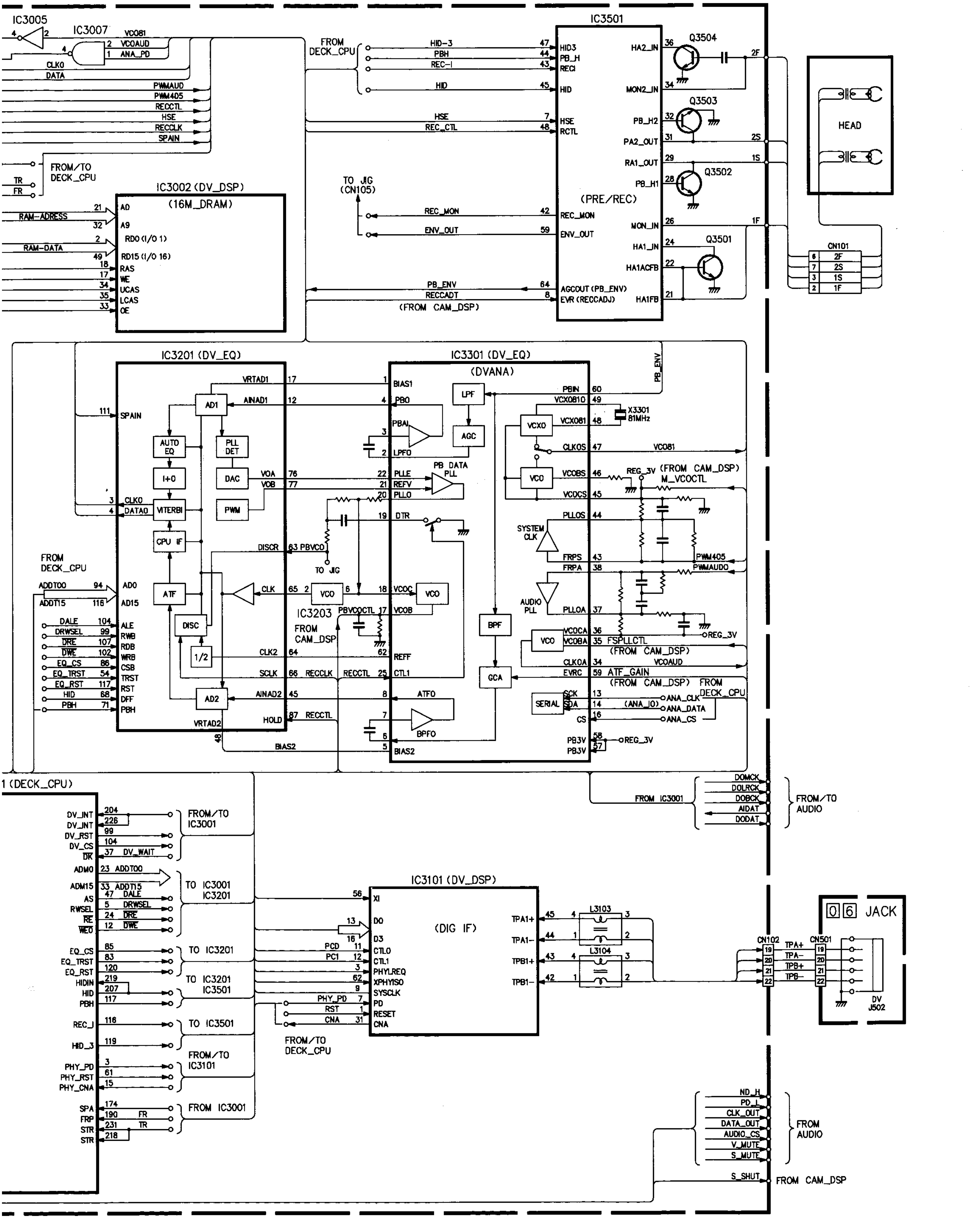

08 B/W VF PWB
YB10280-01-01
19
1
CN7201
20
2
R7201
D7201
1
2
R7204
Q7201
CN7203
R7202
R7203
C7201
19
1
CN7202
20
2

4.27 VIDEO SYSTEM BLOCK DIAGRAM

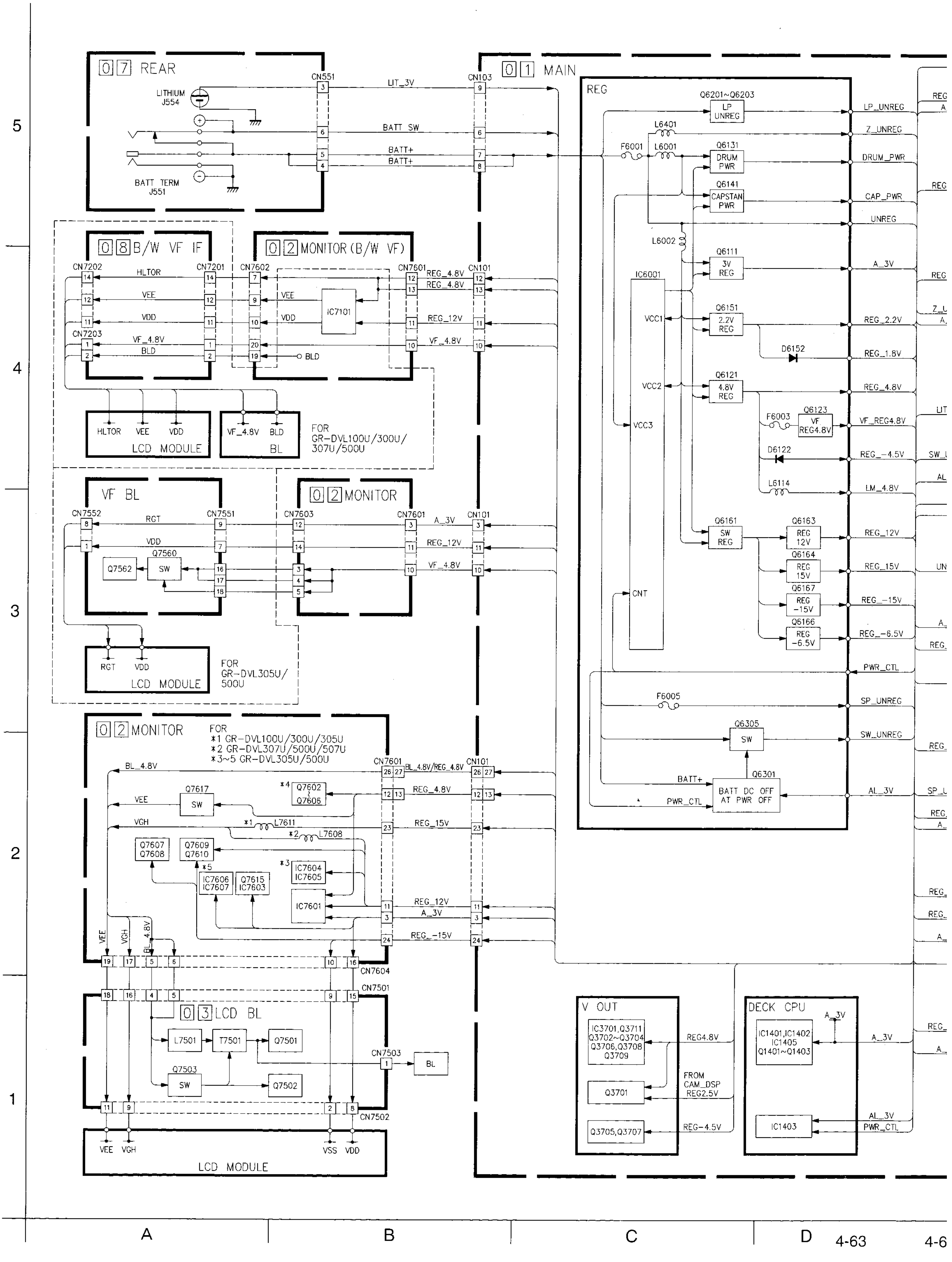

04 CCD
01 MAIN
07 REAR
06 JACK
OP BLOCK
IRIS CTL
IC5001 (CCD)
VOUT
Q5001 BUF
CN5001
CCD OUT
CN107
IC5601 (CDS/AGC/AD)
COSIN OBCP SPBLK SPSIG CDS_CS CLK DATA ADCLK
D9 D0
CAM_AD0~CAM_AD9
V1 V2 V3 V4 SUB RG H1 H2
SHP SHD CLK_OUT DATA_OUT CLK18
IC5501 (TG/V.DRV)
OBCLP SHP SHD
VGAT XAVD XAHD ID CLK18 CLK13 CLK27 TG_CS
CLK (CLK OUT)
DATA (DATA OUT)
CAM/VTR TG_RST PBLK CK
A_3V
X5501 54MHz CXO
CN108
FOCUS#3 FOCUS#1 FOCUS#4 FOCUS#2
ZOOM#2 ZOOM#4 ZOOM#3 ZOOM#1
BRIDGE DRIVER
PULSE GENERATOR
SERIAL-PARARELLE DECODER
OSCIN VD SCLK SDATA LATCH RESET
IC4851
CLK45 CAM_VD CLK_OUT DATA_OUT F/Z_CS F/Z_RST
IC4802~IC4805
HG_VCC+ HG_OUT- HG_VSS- HG_OUT+
GND/DRIVE- DUMP- DRIVE+ DUMP+
HALL AMP
MOTOR DRIVE AMP
R4820,C4813
LPF
(COMP)
IRIS_O/C
HALL_AD
IRIS_PWM
FROM IC4301-158PIN
IRIS & AF/ZOOM
X1002 32KHz
XIN XOUT
(SYS
MVD VD TG_RST TG_CS KRST/CLR CDS_CS
X1001 24MHz
OSCO OSCI
F/Z_CS F/Z_RST
IC1014
CLK_OUT PWR_CTL DATA_OUT IRIS_O/C HALL_AD
JLIP_I JLIP_INT RXD TXD
PC J552
JLIP J553
CN551
CN103
PC_TX PC_RX JLIP_RX JLIP_TX
IC1302
T1 OUT T1 IN R1 IN R1 OUT
PC IF
IC1301
IC1303
D1303
AL_3V
Q1301
IF_TX IF_RX JLIP_I
RX AL_3V TX
IC1002 (ON SCREEN)
VF_B VC0 VC1 (VF_G) VC2 (VF_R) BLK4 (VBLK) VC3 (VC1) BLKB (BLK1)
DATA CS SBT2
OSD_DATA OSD_CS OSD_CLK
FROM DECK_CPU
EXD HD VD
DOT_CLK OSD_HD OSD_VD
FROM CAM_DSP
TO CAM_DSP
SRV_TX IF_RX
SRV_RST SRV_CS SRV_RDY ODD_EVEN
FROM/TO DECK_CPU
AV JACK J501
S_OUT J503
CN501 CN102
Y_OUT V_OUT C_OUT
V OUT
Q3704,Q3705 DRV
Q3702 BUF
Q3701 AMP
DV_Y (Y_OUT)
IC3701 6dB DRV
C3714 C3713
Q3703 BUF
Q3706,Q3707 DRV
Q3709 BUF
Q3708 AMP
DV_C (C_OUT)
FROM CAM_DSP
Y2_OUT B_YOUT R_YOUT
Q4306 BUF
Q4302 BUF
1 2 3 4 5
A B C D


IC4301 (CAMERA_DSP)
(Y/C)
A/V CONV
V/M APT CTL
PROCESS
G CTL
1H DL
Y/C SEPA (3LINE)
RGB SEPA
WB
MATRIX
DVC IO IF/FIELD MEMORY CONTROL INTERFACE
D/A CONV
BLK
LIM
MOD
CLAMP
BUF
LPF
SUB CARRIER MODULE
ADIN9
ADIN0
CLR
CLK27
CLK18
CLK13
ID
VDTG
HDTG
LMFO
NAND1-A
Y2_OUT
Y_OUT
R-YOUT
B-YOUT
C_OUT
CLK45
PWM
VDMDA
VDCPU
OMT
NAND1-B (CCD_KIZU)
FLDCPU (MFLD)
BUS15
BUS0
LWE
ALE
RE
HWE
CLKOSD (DOT_CLK)
HDOSD
VDOSD
VB
VG
VR
VBLK
VC1
BLK1
DY10
DY13
DC10
DC13
OUTH
OUTV
DY00
DY03
DC00
DC03
INH
INV
FROM/TO DV_DSP
EOUT8
EOUT7
EOUT6
EOUT5
EOUT4
PBVCOCTL
FSPLLCTL
M_VCOCTL
ATF_GAIN
RECCADJ
TO EQ (DVANA)
(PRE/AMP)
K_OUT
S_SHUT
TO AUDIO
TMC0
TMC3
TMY0
TMY7
WAE1
MCLK
WAD
FMWE1
IE1
FMWR
FMC0
FMC3
FMY0
FMY7
RAD
FMRE1
RAE1
DIN0
DIN3
DIN4
DIN11
WADE/RX
WCLK
WXAD
WE
IE
WR/TR
DO0
DO3
DO4
DO11
RCLK
RXAD
RE
RADE/RX
IC4302 (FILED MEMORY)
IC1003 (E² PROM)
SI
SO
SCK
S_DT_OUT
S_DT_IN
S_CLK
IC1004 (RTC)
XIN
XOUT
SIO
CLK
R1045
IC1001
(SYSCON CPU)
VD
TG_RST
TG_CS
KRST/CLR
CDS_CS
OSCO
OSCI
F/Z_CS
F/Z_RST
CLK_OUT
PWR_CTL
DATA_OUT
IRIS_O/C
HALL_AD
JLIP_I
JLIP_INT
RXD
TXD
SRV_RST
SRV_CS
SRV_RDY
ODD_EVEN
OMT
CCD_KIZU
MFLD
CLWE
CALE
CRE
CHWE
AUDIO_CS
A_MUTE
V_MUTE
S_MUTE
ND_H
PD_I
K_CTL
KRST/RST
XAVD
XAHD
VGAT
PBLK
CAM_VD
MVD
D9
02 MONITOR
IC7101 B/W VF
VIDEO IN
V_REF
FOR GR-DVL100U/300U/307U/507U
08 B/W IF
LCD MODULE
CN7602
CN7201
CN7202
IC7601
ROUT
GOUT
BOUT
LCD_Y
LCD_B-Y
LCD_R-Y
SCLK
IC7603
SCK
SI
IC7604
CN7604
CN7501
CN7502
MON_R
MON_G
MON_B
03 LCD BL
LCD MODULE
R
G
B
CN7603
CN7551
CN7552
CVF_G
CVF_R
CVF_B
G_OUT
R_OUT
B_OUT
09 VF BL
FOR GR-DVL305U/500U
Q4306
Q4302
BUF
CN101
CN7501
CLK_OUT
DATA_OUT

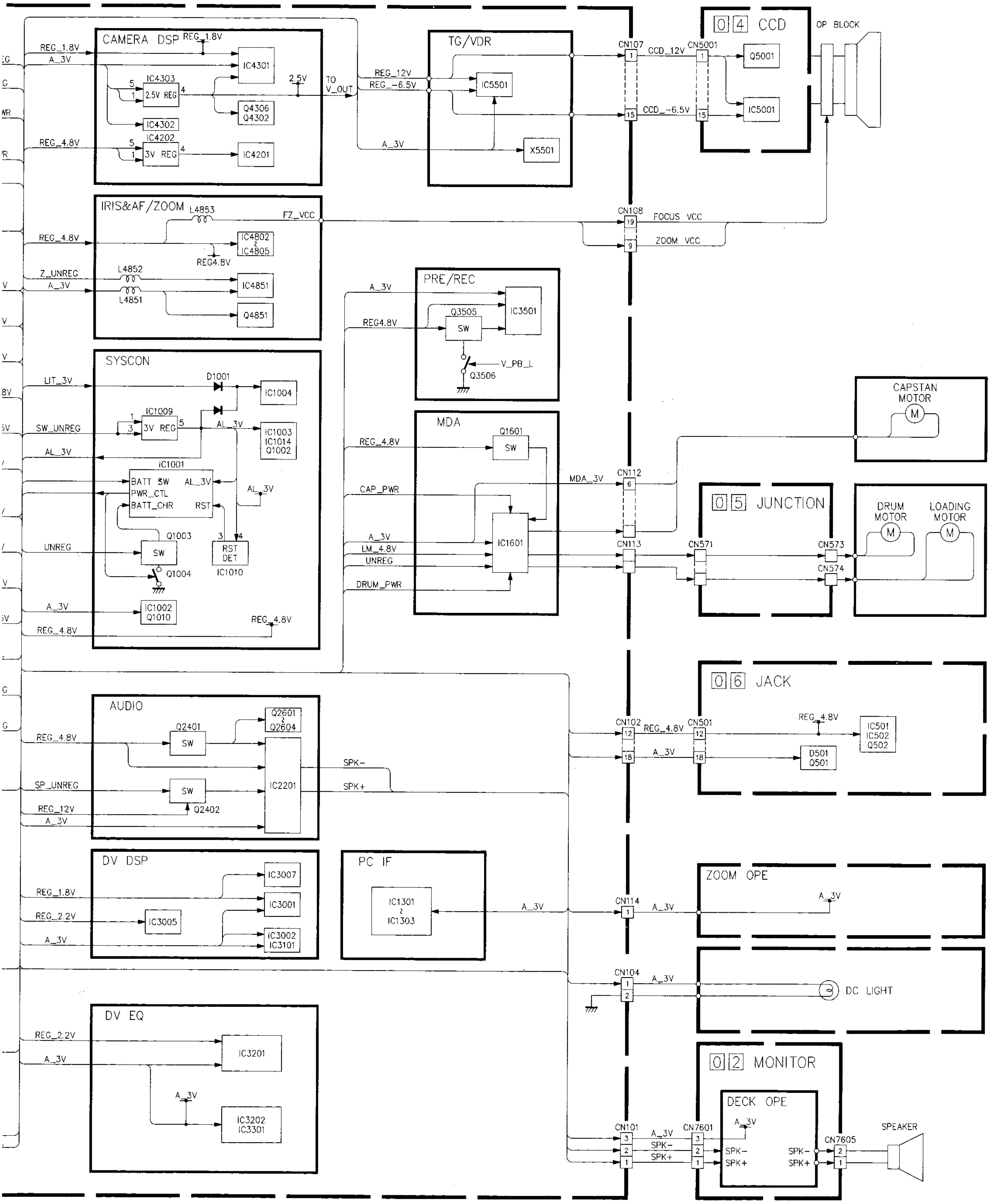

0 1 MAIN
IC3001 (DV_DSP)
IC3005
FROM/TO CAM_DSP
YS00
YS03
BRS00
BRS03
OUTH
OUTV
YSI0
YSI3
BRSI0
BRSI3
INH
INV
OSC27I
FROM TG/VDR
CLK27
FROM/TO DECK_CPU
FROM CAM_DSP
FROM CAM_DSP
ADDT00
ADDT15
DV_RST
DALE
DWE
DRE
DRWSEL
DV_CS
DV_INT
DV_WAIT
CPUAD0
CPUAD15
XRST
CPUALE
XCPUDSTB0
XCPUDSTB1
XCPURW
XCPUCS
XINT
CPUWAIT
OSC48I
OSC48O
X3001 24.576MHz
VIDEO I/F (VBID DET RAM)
COMPRESS (DCT,VLC VLD WORK RAM)
OUTER ECC (ENC/DET)
RAM (SUB/AUX)
INNER ECC (ENC/DEC)
FORMATTER (Formatting Sync Detect ID Protect De-formatting)
RAM (CLOCK CONV)
D-RAM I/F
HOST CPU I/F
IEE1394 LINK (ISO/ ASYNC FIFO)
AUDIO (WORK RAM PROGRAM RISC CORE)
(DECK_DSP)
VCO405I
VCOAUDI
PB CLK
PB DATA
PWMAUD0
PWM4050
RECCTL
RECDATA
RECCLK
SPA
HSP
HID
TRKREF
FRREF
TR
FR
RAMADRS0
RAMADRS9
RAMDATA0
RAMDATA15
RAMRAS
RAMWE
RAMCAS0
RAMCAS1
RAMOE
RAM-ADR
RAM-DA
PHYCLK
PHYDATA0
PHYDATA3
PHYCTL0
PHYCTL1
PHYLREQ
XPHYISO
SCLK
PC0
PC1
AILRCK
AIBCK
AIMCK
AODAT
AIDAT0
AIDAT1
DOLRCK
DOBCK
DOMCK
DODAT
AIDAT
IC1401 (DECK_C
TO IC3001 IC3301
ANA_IO
ANA_PD
ANA_CLK
ANA_IN
ANA_OUT
ANA_CS
TO V OUT
AGC_RST
FROM CAM_DSP
MVD
VD
TO SYSCON (IC1002)
OSD_CLK
OSD_DATA
OSD_CS
FROM/TO SYSCON
SRV_CS
S_CLK
SYS_IN
SYS_OUT
MSELECT
SRV_RDY
SRV_RST
VMUTEIN
ODD_EVEN
FROM/TO SYSCON (IC1001)
(IC1014)
PWR_CTL
IC1403
SRV_TX
IF_RX
TXD
RXD
FROM TG/V.DRV
CLK_27
OSCI
S_SHUT


IC3005
IC3007
VCO81
VCOAUD
ANA_PD
CLKO
DATA
PWMAUD
PWM405
RECCTL
HSE
RECCLK
SPAIN
FROM/TO DECK_CPU
TR
FR
IC3002 (DV_DSP)
(16M_DRAM)
RAM-ADRESS
RAM-DATA
A0
A9
RD0 (I/O 1)
RD15 (I/O 16)
RAS
WE
UCAS
LCAS
OE
FROM DECK_CPU
HID-3
PBH
REC-I
HID
REC_CTL
TO JIG (CN105)
REC_MON
ENV_OUT
PB_ENV
RECCADT
(FROM CAM_DSP)
IC3501
HID3
PB_H
RECI
HSE
RCTL
(PRE/REC)
AGCOUT (PB_ENV)
EVR (RECCADJ)
HA2_IN
MON2_IN
PB_H2
PA2_OUT
RA1_OUT
PB_H1
MON_IN
HA1_IN
HA1ACFB
HA1FB
Q3504
Q3503
Q3502
Q3501
2F
2S
1S
1F
HEAD
CN101
IC3201 (DV_EQ)
SPAIN
AD1
AUTO EQ
PLL DET
I+0
DAC
VITERBI
PWM
CPU IF
ATF
DISC
1/2
AD2
CLKO
DATAO
VRTAD1
AINAD1
VOA
VOB
DISCR
PBVCO
TO JIG
CLK
CLK2
SCLK
RECCLK
RECCTL
AINAD2
HOLD
VRTAD2
BIAS2
FROM DECK_CPU
ADDT00
ADDT15
AD0
AD15
DALE
DRWSEL
DRE
DWE
EQ_CS
EQ_TRST
EQ_RST
HID
PBH
ALE
RWB
RDB
WRB
CSB
TRST
RST
DFF
IC3203
VCO
PBVCOCTL
FROM CAM_DSP
IC3301 (DV_EQ)
(DVANA)
BIAS1
PB0
PBAI
LPF0
LPF
AGC
PB DATA PLL
PLLE
REFV
PLLO
DTR
VCOC
VCOB
REFF
CTL1
ATFO
BPFO
BPF
GCA
BIAS2
PBIN
VCXO810
VCXO81
X3301 81MHz
VCXO
CLKOS
VCO81
VCOBS
VCOCS
REG_3V
(FROM CAM_DSP)
M_VCOCTL
PLLOS
SYSTEM CLK
FRPS
FRPA
PWM405
PWMAUDO
AUDIO PLL
PLLOA
VCOCA
VCOBA
FSPLLCTL
CLKOA
VCOAUD
EVRC
ATF_GAIN
(FROM CAM_DSP) FROM DECK_CPU
SERIAL
SCK
SDA
CS
(ANA_IO)
ANA_CLK
ANA_DATA
ANA_CS
PB3V
REG_3V
PB_ENV
1 (DECK_CPU)
DV_INT
DV_RST
DV_CS
DK
DV_WAIT
FROM/TO IC3001
ADM0
ADM15
AS
RWSEL
RE
WEO
TO IC3001 IC3201
EQ_CS
EQ_TRST
EQ_RST
HIDIN
HID
PBH
TO IC3201
TO IC3201 IC3501
REC_I
TO IC3501
HID_3
PHY_PD
PHY_RST
PHY_CNA
FROM/TO IC3101
SPA
FRP
STR
FR
TR
FROM IC3001
DOMCK
DOLRCK
DOBCK
AIDAT
DODAT
FROM/TO AUDIO
FROM IC3001
IC3101 (DV_DSP)
(DIG IF)
XI
D0
D3
CTL0
CTL1
PHYLREQ
XPHYISO
SYSCLK
PD
RESET
CNA
PCD
PC1
RST
FROM/TO DECK_CPU
TPA1+
TPA1-
TPB1+
TPB1-
L3103
L3104
CN102
CN501
TPA+
TPA-
TPB+
TPB-
06 JACK
DV J502
ND_H
PD_J
CLK_OUT
DATA_OUT
AUDIO_CS
V_MUTE
S_MUTE
FROM AUDIO
S_SHUT
FROM CAM_DSP
M
N
O
P

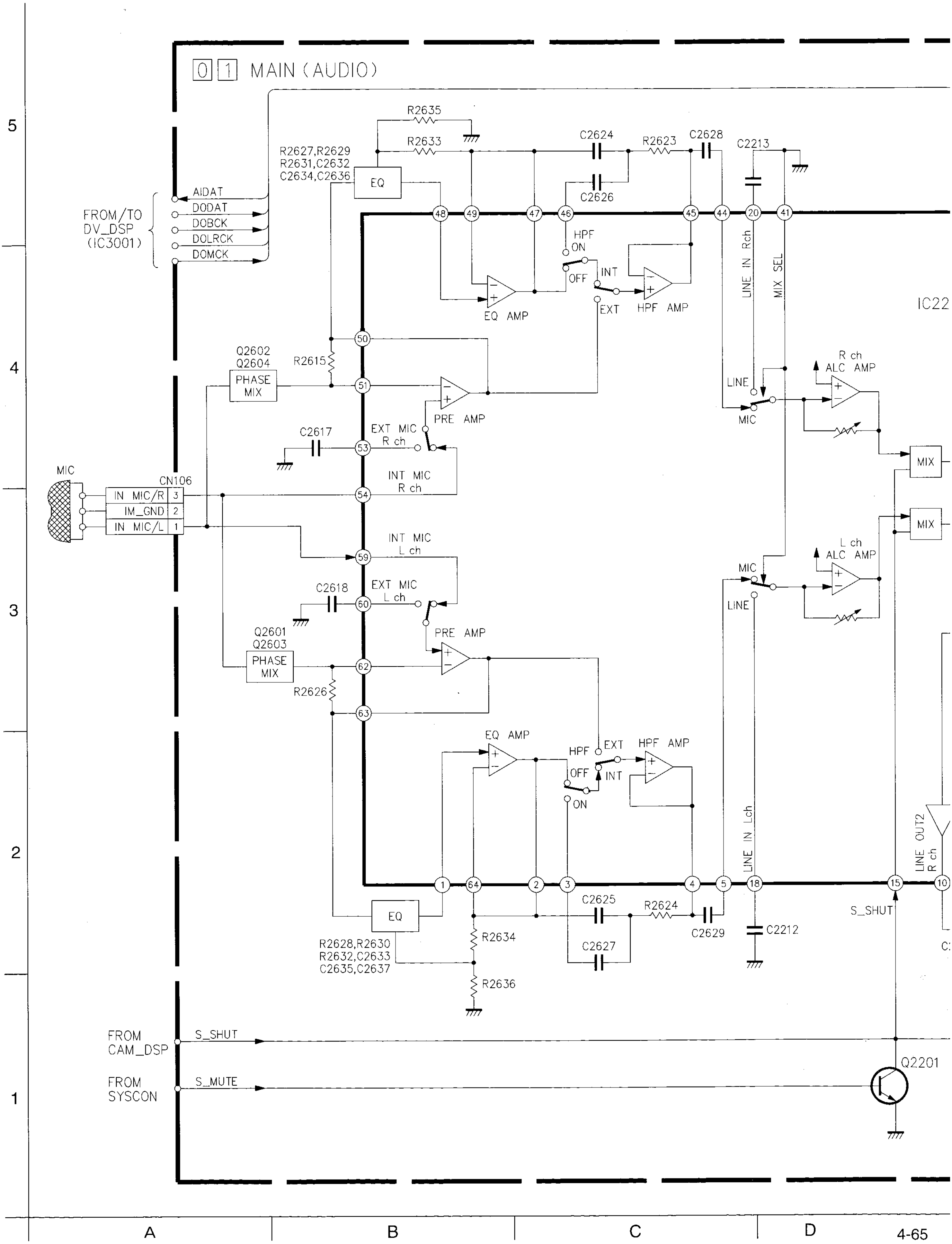
4.28 POWER SYSTEM BLOCK DIAGRAM

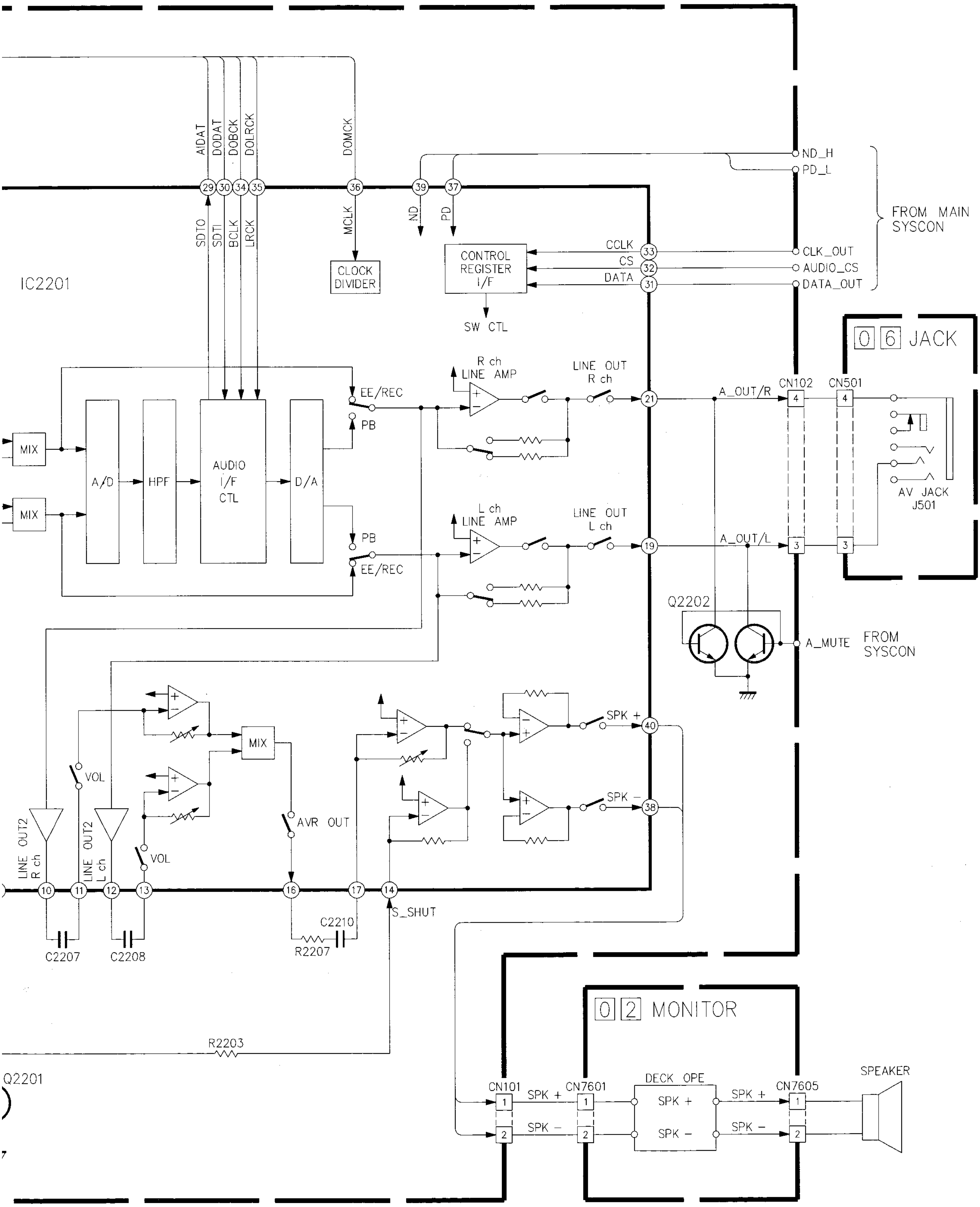


07 REAR
LITHIUM J554
BATT TERM J551
CN551
LIT_3V
BATT SW
BATT+
BATT+
CN103
01 MAIN
REG
Q6201~Q6203
LP UNREG
L6401
F6001
L6001
Q6131
DRUM PWR
Q6141
CAPSTAN PWR
L6002
Q6111
3V REG
IC6001
VCC1
Q6151
2.2V REG
D6152
VCC2
Q6121
4.8V REG
F6003
Q6123
VF REG4.8V
VCC3
D6122
L6114
Q6161
SW REG
Q6163
REG 12V
Q6164
REG 15V
Q6167
REG -15V
Q6166
REG -6.5V
CNT
LP_UNREG
Z_UNREG
DRUM_PWR
CAP_PWR
UNREG
A_3V
REG_2.2V
REG_1.8V
REG_4.8V
VF_REG4.8V
REG_-4.5V
LM_4.8V
REG_12V
REG_15V
REG_-15V
REG_-6.5V
PWR_CTL
F6005
SP_UNREG
Q6305
SW
SW_UNREG
Q6301
BATT+
BATT DC OFF AT PWR OFF
PWR_CTL
AL_3V
08 B/W VF IF
CN7202
CN7201
HLTOR
VEE
VDD
CN7203
VF_4.8V
BLD
02 MONITOR (B/W VF)
CN7602
CN7601
IC7101
VEE
VDD
BLD
REG_4.8V
REG_4.8V
REG_12V
VF_4.8V
CN101
HLTOR VEE VDD
LCD MODULE
VF_4.8V BLD
BL
FOR GR-DVL100U/300U/307U/500U
VF BL
CN7552
CN7551
RGT
VDD
Q7560
Q7562
SW
02 MONITOR
CN7603
CN7601
A_3V
REG_12V
VF_4.8V
CN101
RGT VDD
LCD MODULE
FOR GR-DVL305U/500U
02 MONITOR
FOR
*1 GR-DVL100U/300U/305U
*2 GR-DVL307U/500U/507U
*3~5 GR-DVL305U/500U
BL_4.8V
CN7601
BL_4.8V/REG_4.8V
CN101
Q7617
SW
VEE
*4 Q7602~Q7606
REG_4.8V
VGH
*1 L7611
*2 L7608
REG_15V
Q7607 Q7608
Q7609 Q7610
*5
IC7606 IC7607
Q7615 IC7603
*3 IC7604 IC7605
IC7601
REG_12V
A_3V
REG_-15V
VEE
VGH
BL_4.8V
CN7604
CN7501
03 LCD BL
L7501
T7501
Q7501
CN7503
BL
Q7503
SW
Q7502
CN7502
VEE VGH
VSS VDD
LCD MODULE
V OUT
IC3701,Q3711 Q3702~Q3704 Q3706,Q3708 Q3709
Q3701
Q3705,Q3707
REG4.8V
FROM CAM_DSP REG2.5V
REG-4.5V
DECK CPU
A_3V
IC1401,IC1402 IC1405 Q1401~Q1403
IC1403
A_3V
AL_3V
PWR_CTL
REG
LIT
SW_
AL
UN
REG
Z_
A
SP_
5
4
3
2
1
A
B
C
D

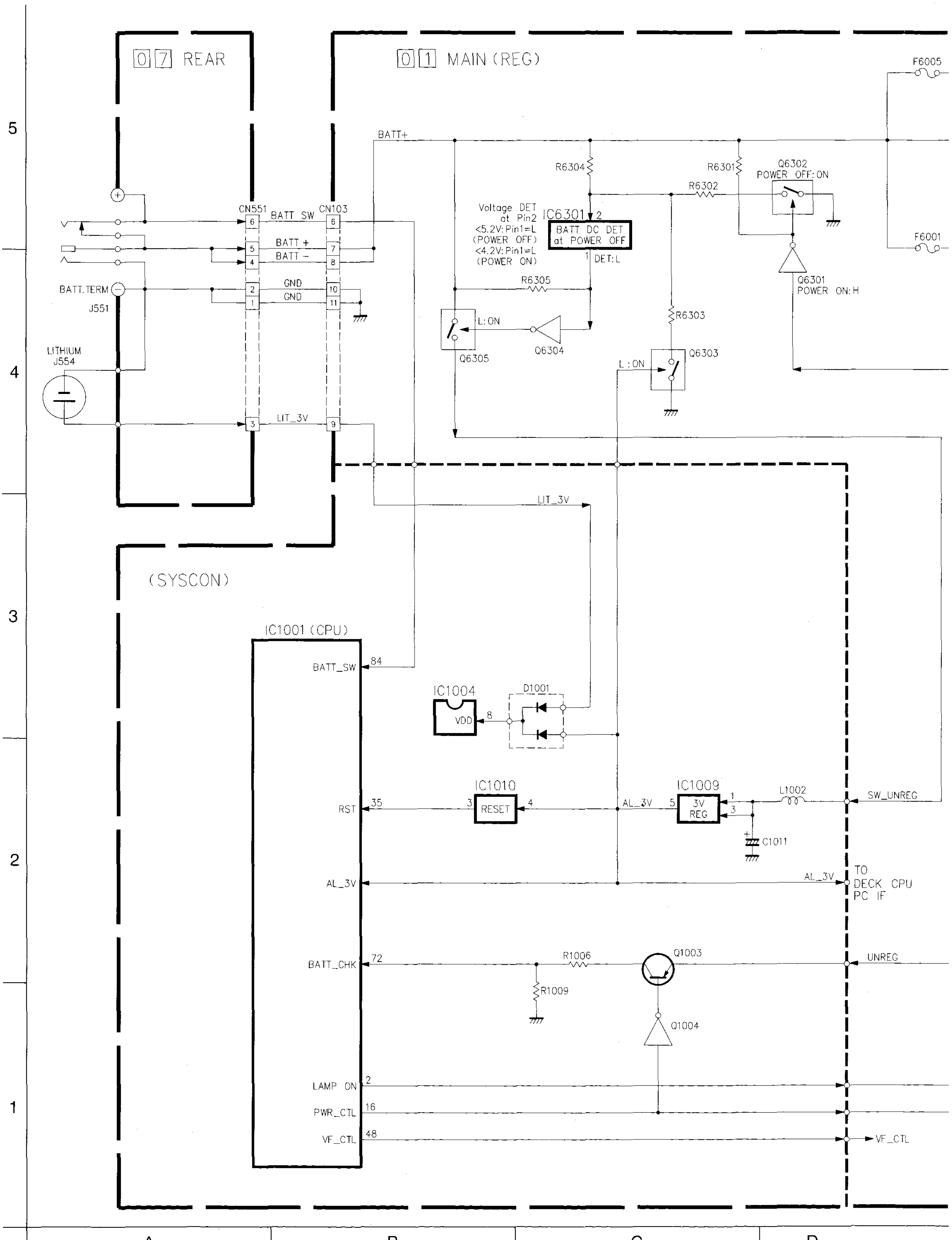

CAMERA DSP
REG_1.8V
A_3V
IC4301
IC4303
2.5V REG
2.5V
TO V_OUT
Q4306
Q4302
IC4302
IC4202
3V REG
IC4201
REG_4.8V
TG/VDR
REG_12V
REG_-6.5V
IC5501
X5501
CN107
CCD_12V
CCD_-6.5V
CN5001
04 CCD
Q5001
IC5001
OP BLOCK
IRIS&AF/ZOOM
L4853
FZ_VCC
IC4802
~
IC4805
REG4.8V
Z_UNREG
L4852
L4851
IC4851
Q4851
CN108
FOCUS VCC
ZOOM VCC
PRE/REC
Q3505
SW
IC3501
V_PB_L
Q3506
SYSCON
LIT_3V
D1001
IC1004
IC1009
3V REG
SW_UNREG
AL_3V
IC1003
IC1014
Q1002
IC1001
BATT SW
PWR_CTL
BATT_CHR
RST
Q1003
UNREG
Q1004
RST DET
IC1010
IC1002
Q1010
MDA
Q1601
CAP_PWR
LM_4.8V
DRUM_PWR
IC1601
MDA_3V
CN112
CN113
CAPSTAN MOTOR
M
05 JUNCTION
CN571
CN573
CN574
DRUM MOTOR
LOADING MOTOR
AUDIO
Q2401
Q2601
~
Q2604
SP_UNREG
Q2402
IC2201
SPK-
SPK+
CN102
CN501
06 JACK
IC501
IC502
Q502
D501
Q501
DV DSP
REG_2.2V
IC3007
IC3001
IC3005
IC3002
IC3101
PC IF
IC1301
~
IC1303
CN114
ZOOM OPE
CN104
DC LIGHT
DV EQ
IC3201
IC3202
IC3301
CN101
CN7601
02 MONITOR
DECK OPE
CN7605
SPEAKER

4.29 AUDIO SYSTEM BLOCK DIAGRAM

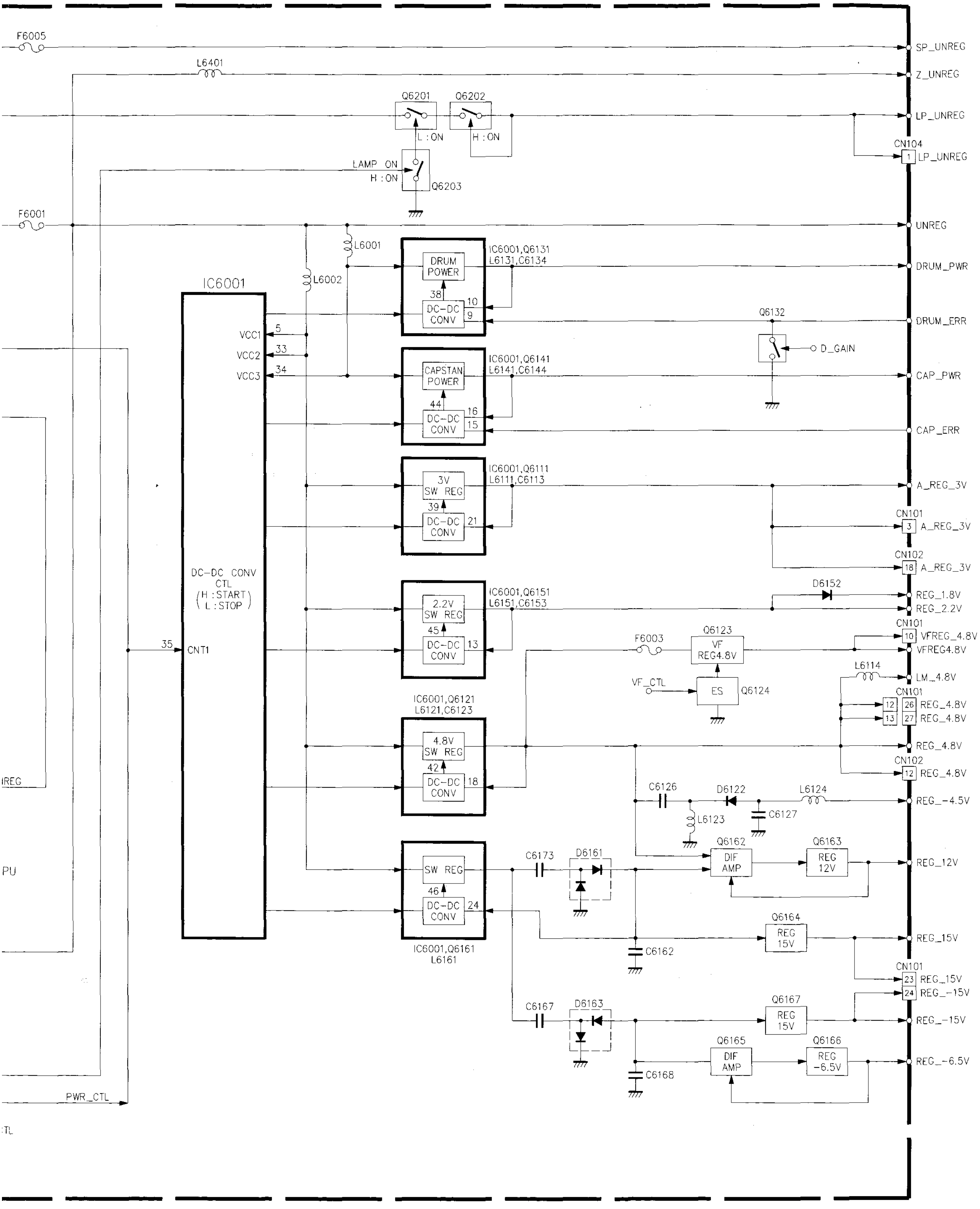

0 1 MAIN (AUDIO)
FROM/TO
DV_DSP
(IC3001)
AIDAT
DODAT
DOBCK
DOLRCK
DOMCK
R2635
R2633
R2627,R2629
R2631,C2632
C2634,C2636
EQ
C2624
C2626
R2623
C2628
C2213
48
49
47
46
45
44
20
41
HPF
ON
OFF
INT
EXT
EQ AMP
HPF AMP
LINE IN Rch
MIX SEL
IC22
50
R2615
Q2602
Q2604
PHASE
MIX
51
PRE AMP
LINE
MIC
R ch
ALC AMP
C2617
EXT MIC
R ch
53
MIX
MIC
CN106
IN MIC/R 3
IM_GND 2
IN MIC/L 1
INT MIC
R ch
54
MIX
INT MIC
L ch
59
L ch
ALC AMP
MIC
LINE
C2618
EXT MIC
L ch
60
Q2601
Q2603
PHASE
MIX
PRE AMP
62
R2626
63
EQ AMP
HPF
EXT
HPF AMP
OFF
INT
ON
LINE IN Lch
LINE OUT2
R ch
1
64
2
3
4
5
18
15
10
EQ
R2628,R2630
R2632,C2633
C2635,C2637
R2634
R2636
C2625
C2627
R2624
C2629
C2212
S_SHUT
FROM
CAM_DSP
S_SHUT
FROM
SYSCON
S_MUTE
Q2201
5
4
3
2
1
A
B
C
D


AIDAT
DODAT
DOBCK
DOLRCK
DOMCK
29
30
34
35
36
39
37
ND_H
PD_L
FROM MAIN SYSCON
SDTO
SDTI
BCLK
LRCK
MCLK
ND
PD
CLOCK DIVIDER
CONTROL REGISTER I/F
CCLK
CS
DATA
33
32
31
CLK_OUT
AUDIO_CS
DATA_OUT
SW CTL
IC2201
06 JACK
R ch LINE AMP
LINE OUT R ch
EE/REC
PB
21
A_OUT/R
CN102
CN501
4
MIX
A/D
HPF
AUDIO I/F CTL
D/A
AV JACK J501
L ch LINE AMP
LINE OUT L ch
19
A_OUT/L
3
Q2202
A_MUTE
FROM SYSCON
SPK +
40
SPK −
38
MIX
VOL
AVR OUT
LINE OUT2 R ch
LINE OUT2 L ch
10
11
12
13
16
17
14
S_SHUT
C2207
C2208
C2210
R2207
R2203
Q2201
02 MONITOR
CN101
CN7601
DECK OPE
CN7605
SPEAKER
1
2
SPK +
SPK −

4.30 REGULATOR SYSTEM BLOCK DIAGRAM



5
4
3
2
1
A
B
C
D
0 7 REAR
0 1 MAIN (REG)
(SYSCON)
F6005
F6001
BATT+
R6304
R6301
Q6302
POWER OFF: ON
R6302
Voltage DET
at Pin2
<5.2V: Pin1=L
(POWER OFF)
<4.2V: Pin1=L
(POWER ON)
IC6301
BATT DC DET
at POWER OFF
DET: L
Q6301
POWER ON: H
R6305
R6303
L: ON
Q6305
Q6304
Q6303
L : ON
CN551
CN103
BATT SW
BATT +
BATT −
GND
GND
LIT_3V
BATT. TERM
J551
LITHIUM
J554
LIT_3V
IC1001 (CPU)
BATT_SW
84
RST
35
AL_3V
BATT_CHK
72
LAMP ON
2
PWR_CTL
16
VF_CTL
48
IC1004
VDD
8
D1001
IC1010
RESET
3
4
AL_3V
IC1009
3V
REG
5
1
3
L1002
C1011
SW_UNREG
AL_3V
TO
DECK CPU
PC IF
R1006
R1009
Q1003
Q1004
UNREG
VF_CTL


F6005
L6401
Q6201
Q6202
L : ON
H : ON
LAMP ON
H : ON
Q6203
F6001
L6001
L6002
IC6001
VCC1
VCC2
VCC3
5
33
34
DC-DC CONV
CTL
(H : START
L : STOP)
35
CNT1
DRUM POWER
38
DC-DC CONV
10
9
IC6001,Q6131
L6131,C6134
CAPSTAN POWER
44
16
15
IC6001,Q6141
L6141,C6144
3V SW REG
39
21
IC6001,Q6111
L6111,C6113
2.2V SW REG
45
13
IC6001,Q6151
L6151,C6153
IC6001,Q6121
L6121,C6123
4.8V SW REG
42
18
SW REG
46
24
IC6001,Q6161
L6161
Q6132
D_GAIN
D6152
F6003
Q6123
VF REG4.8V
VF_CTL
ES
Q6124
L6114
C6126
D6122
L6124
L6123
C6127
C6173
D6161
Q6162
DIF AMP
Q6163
REG 12V
Q6164
REG 15V
C6162
C6167
D6163
Q6167
REG 15V
Q6165
DIF AMP
Q6166
REG -6.5V
C6168
SP_UNREG
Z_UNREG
LP_UNREG
CN104
1
LP_UNREG
UNREG
DRUM_PWR
DRUM_ERR
CAP_PWR
CAP_ERR
A_REG_3V
CN101
3
A_REG_3V
CN102
18
A_REG_3V
REG_1.8V
REG_2.2V
CN101
10
VFREG_4.8V
VFREG4.8V
LM_4.8V
CN101
12
26
REG_4.8V
13
27
REG_4.8V
REG_4.8V
CN102
12
REG_4.8V
REG_-4.5V
REG_12V
REG_15V
CN101
23
REG_15V
24
REG_-15V
REG_-15V
REG_-6.5V
IREG
PU
PWR_CTL
TL

4.31 VOLTAGE CHARTS

Note: Parts whose data cannot be obtained (for example, CSP IC, etc.) are omitted from the following chart in some cases.

<SYSCON>

MODE PIN NO.	REC	PLAY
IC1001		
1	0	0
2	0	0
3	0	0
4	0	3
5	2.8	2.8
6	0	0
7	3	3
8	0	0
9	0	0
10	1	1
11	0	0
12	1.9	0
13	0	0
14	1.9	1.8
15	1.1	0
16	3	3
17	1.1	1.1
18	0	0
19	0	0
20	3	3
21	3	3
22	3	3
23	0	0
24	0	0
25	3	3
26	1.9	1.9
27	1.4	1.4
28	0	0
29	3	3
30	0	1.5
31	1.5	1.4
32	0	0
33	1.5	1.5
34	3	3
35	3	3
36	2.9	2.9
37	0	0
38	3	3
39	2.9	2.9
40	0	0
41	0	0
42	0	0
43	3	3
44	3	2.9
45	3	3
46	3	3
47	0	0
48	0	0
49	3	3
50	3	3
51	1.5	0
52	0	0
53	3	3
54	3	3
55	2.9	2.8
56	1.6	0
57	3	3
58	3	3
59	0	0
60	3	0
61	3	3
62	3	3
63	3	0
64	3	3
65	0	0
66	0	0
67	0	0
68	3	3
69	0	0
70	0	0
71	0	0
72	2.4	2.4
73	3	3
74	1.5	1.5
75	1.5	1.5
76	2.8	2.8
77	1.2	2.3
78	0	0
79	0	0
80	0	0
81	3	3
82	1.2	1.3
83	0	0
84	2.1	2.1
85	3	3
86	3	3
87	3	3
88	0	0
89	3	0
90	0	0
91	0	3
92	0	0
93	0	0
94	3	3
95	3	3
96	3	3
97	0	0
98	3	3
99	0	0
100	3	3
101	3	3
102	0	3
103	0	3
104	3	3
105	3	0
106	3	3
107	0	0
108	3	3
109	0	0
110	3	3
111	3	3
112	0	0
113	0	0
114	3	3
115	0	0
116	0	0
117	0	3
118	0	0
119	3	3
120	2.2	3
121	3	3
122	0	3
123	3	0
124	0	0
125	0	0
126	0	0
127	0	3
128	0	0
IC1002		
1	1.7	1.7
2	0	0
3	1.8	1.9
4	3	3
5	3	3
6	3	3
7	1.4	1.4
8	1.5	1.5
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	2.9	0
20	2.8	2.8
IC1003		
1	3	3
2	1.8	1.8
3	3	3
4	0	0
5	3	3
6	3	3
7	3	3
8	3	3
IC1004		
1	0	0
2	3	3
3	1.8	1.8
4	0	0
5	3	2.9
6	0.5	0.5
7	0.5	0.4
8	3	3
IC1009		
1	6.6	6.6
2	0	0
3	6.6	6.6
4	0	0
5	3	0
IC1010		
1	0	0
2	0	0
3	3	3
4	3	3
IC1014		
1	3	0
2	3	3
3	3	3
4	3	3
5	3	3
6	3	3
7	0	0
8	2.9	3
9	3	3
10	3	0
11	3	3
12	3	3
13	3	3
14	3	3
Q1002		
E	3	3
C	0	0
B	3	3
Q1003		
E	6.6	6.6
C	6.6	6.6
B	0	0
Q1004		
E	0	0
C	0	0
B	3	3
Q1008		
E	0	0
C	0	0
B	0	0
Q1009		
E	0	0
C	0	3
B	3	0
Q1010		
E	3	0
C	0	0
B	0	3

<PC IF>

MODE PIN NO.	REC	PLAY
IC1301		
1	0	3
2	3	3
3	3	3
4	0	0
5	0	0
6	0	0
7	0	0
8	3	3
9	3	3
10	0	3
11	3	3
12	3	3
13	3	3
14	3	3
IC1302		
1	0	0
2	3	3
3	3	3
4	3	3
5	3	3
6	0	0
7	0	0
8	0	0
9	3	3
10	0	0
11	3	3
12	0	0
13	0	0
14	0	0
15	3	3
16	3	3
IC1303		
1	0	0
2	3	3
3	0	0
4	0	0
5	0	0
6	0	3
7	0	0
8	0	0
9	0	0
10	3	3
11	0	0
12	0	0
13	3	3
14	3	3
Q1301		
E	0	0
C	0.4	0.6
B	0	0

<DECK CPU>

MODE PIN NO.	REC	PLAY
IC1402		
1	-	-
2	3	3
3	-	-
4	0	0
5	-	-
6	0	0
7	-	-
8	3	3
IC1403		
1	3	3
2	3	3
3	3	3
4	0	0
5	3	3
6	3	3
7	3	3
8	3	3
IC1405		
1	3	3
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	3	3
8	3	3
Q1401		
E	3	3
C	3	3
B	3	3
Q1402		
1	0	0
2	3	3
3	0	3
4	2.8	0
5	0	0
Q1403		
1	0	0
2	0	0
3	3	3
4	0	-0.4
5	3	3

<MDA>

MODE PIN NO.	REC	PLAY
IC1601		
1	0	0
2	0.8	0.9
3	0.8	0.8
4	0	0
5	0.8	0.8
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	4.8	4.8
15	0	0
16	0	0.4
17	0	0
18	0.4	0
19	0	0
20	0.4	0
21	0	0
22	0	0
23	0.9	0.9
24	6.6	6.7
25	0	1.5
26	1.5	1.5
27	1.5	1.4

MODE PIN NO.	REC	PLAY
28	1.5	1.5
29	1.4	0
30	1.5	1.5
31	1.5	1.4
32	0	1.4
33	1.5	1.5
34	1.5	0
35	3	3
36	3	3
37	0	0
38	0.6	0.7
39	0.6	0.6
40	1.2	1.2
41	1.6	1.6
42	0	0.4
43	3	0
44	0	0
45	0	0
46	0	0
47	3	3
48	0	0
49	0	3
50	1.9	1.9
51	0	0
52	1.5	1.5
53	1.1	1.1
54	0	0.4
55	0.6	0.7
56	0	0.7
57	1	1
58	0.6	0.6
59	0	0
60	1	1
61	2.6	2.7
62	1.2	1.2
63	1.5	1.5
64	1.5	1.5
65	1.5	1.5
66	1.5	1.5
67	1.5	1.5
68	0.5	0.5
69	0	0
70	0.8	0.9
71	0	0.9
72	0.9	0.9
73	0	0.9
74	1.1	1.1
75	0	0
76	0	0
77	6.7	6.7
78	1.8	1.8
79	0	0
80	0	0
Q1601		
1	0	0
2	0	0
3	4.8	4.8
4	0	0
5	4.8	4.8

<AUDIO>

MODE PIN NO.	REC	PLAY
IC2201		
1	1.9	0
2	1.9	0
3	1.7	3.5
4	1.8	1.9
5	1.5	1.5
6	1.5	1.5
7	1.5	1.5
8	0	0
9	3	3
10	0.6	1.5
11	0.6	1.5
12	0.6	1.5
13	0.6	1.5
14	1.5	1.5
15	1.5	1.5
16	0	1.5
17	1.3	1.5
18	1.5	1.4
19	1.6	0
20	1.4	1.5
21	1.4	1.2
22	2.4	2.4
23	4.8	4.8
24	0	0
25	0	0
26	0	0
27	3	3
28	0	0
29	1.5	0
30	1.5	1.5
31	3	3
32	3	3
33	3	3
34	1.5	1.5
35	1.5	1.5
36	1.5	1.4
37	3	3
38	0	2.6
39	0	0
40	1.5	2.6
41	3	0
42	0	0
43	5.9	5.1
44	1.5	1.5
45	1.8	0.7
46	1.8	3.5
47	1.8	0
48	1.8	0
49	1.9	0
50	1.9	0
51	1.9	0
52	2.5	0
53	1.8	0.5
54	1.8	2.2
55	3.7	4.1
56	1.8	2.1
57	0	0
58	3.7	4.2
59	1.8	2
60	1.8	0
61	1.8	3.5
62	1.8	0
63	1.8	0
64	1.8	0
Q2201		
E	0	0
C	0	0
B	0.6	0
Q2202		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0

MODE PIN NO.	REC	PLAY
Q2401		
E	3.7	4.2
C	4.8	4.8
B	4.4	4.8
Q2402		
E	5.9	5.1
C	6.7	6.7
B	6.4	6.3
Q2601		
E	2.4	4.2
C	1.3	0
B	1.9	3.6
Q2602		
E	2.4	4.2
C	1.3	0
B	1.9	3.6
Q2603		
E	1.9	3.6
C	3.7	4.2
B	2.4	4.2
Q2604		
E	1.8	3.6
C	3.7	4.2
B	2.4	4.1

<DV DSP>

MODE PIN NO.	REC	PLAY
IC3002		
1	3	3
2	1.3	1.4
3	1.3	1.4
4	1.3	0
5	1.3	1.2
6	3	3
7	1.3	1.2
8	1.3	1.3
9	1.6	1.6
10	0	1.7
11	0	0
12	-	-
13	-	-
14	-	-
15	0	0
16	0	0
17	2.1	2.2
18	1.2	1.2
19	0	0
20	0	0
21	1.6	0
22	1.5	1.6
23	1.5	1.5
24	1.4	1.4
25	3	3
26	0	0
27	1.3	1.4
28	1.5	1.5
29	1.4	0
30	0	1.4
31	1.4	1.4
32	1.4	1.3
33	2.1	2
34	2	2.4
35	0	2.4
36	0	0
37	-	-
38	-	-
39	-	-
40	0	0
41	1.3	1.3
42	1.2	0
43	1.2	0
44	1.2	1.2
45	0	0
46	1.2	0
47	1.2	0
48	0	0

MODE PIN NO.	REC	PLAY
49	1.5	1.5
50	0	0
IC3005		
1	1	1
2	1	1
3	0	0
4	1	0.9
5	2.1	2.1
IC3007		
1	0	1.8
2	1.7	0.8
3	0	0
4	0	0
5	1.8	1.9
IC3101		
1	0	3
2	3	3
3	0	0
4	2.9	3
5	3	3
6	2.9	3
7	3	0
8	0	0
9	0	1.4
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	2.9	3
20	3	2.9
21	3	3
22	3	3
23	0	0
24	3	3
25	2.9	3
26	0	0
27	2.9	2.9
28	0	0
29	0	0
30	0	0
31	3	3
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	0	1.8
45	0	1.8
46	0	1.8
47	0	1.8
48	0	1.8
49	0	0
50	0	0
51	2.9	3
52	0	0
53	0	0
54	0	3
55	3	3
56	0	0
57	0	3
58	3	3
59	0	0
60	0	0.6
61	0	0
62	0	0.6
63	0	0
64	0	0

<DV EQ>

MODE PIN NO.	REC	PLAY
IC3201		
1	0	0
2	0	0
3	0	1.3
4	0	1
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0.7
13	0	0
14	0	0
15	0	0
16	0	0
17	0	1.2
18	0	3
19	3	3
20	3	3
21	3	3
22	0	0
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	0	0
31	3	3
32	0	0
33	2.1	2.1
34	0	0
35	0	0
36	0	0
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	0	0
45	0	1
46	0	0
47	0	0
48	0	1.7
49	3	3
50	0	0
51	3	3
52	0	0
53	0	0
54	3	3
55	3	3
56	0	0
57	3	3
58	2.1	2.1
59	0	0
60	3	3
61	0	0
62	0	0
63	0	1.5
64	2.9	1.2
65	3	1.2
66	1.4	1.4
67	0	0
68	0	1.5
69	0	0
70	0	0
71	0	3
72	0	0
73	2.9	2.9
74	3	3
75	3	0
76	0.8	1.7
77	0.8	1.7
78	0	0

MODE PIN NO.	REC	PLAY
79	0	0
80	3	3
81	0	0
82	0	0
83	0	0
84	0	0
85	0	0
86	3	0
87	3	0
88	0	0
89	0	0
90	0	0
91	3	3
92	0	0
93	2.1	2.1
94	2.7	2.5
95	0	0
96	2.7	2.5
97	0	0
98	0	0
99	2.8	2.9
100	0	0
101	0	0
102	2.9	2.9
103	0	0
104	0	0
105	0	0
106	0	0
107	3	3
108	0	0
109	0	0
110	0	0
111	0	0
112	3	1.5
113	0	0
114	0	0
115	0	0
116	0	0
117	3	3
118	2.1	2.1
119	0	0
120	3	3
IC3202		
1	2.7	1.4
2	0	3
3	0	0
4	3	1.3
5	3	3
IC3301		
1	0	1.2
2	0	1.3
3	0	1.5
4	0	0.7
5	0	1.7
6	1	1
7	0	1.7
8	0	1
9	0	0
10	0	0
11	0	0
12	0	0
13	3	3
14	3	3
15	2.2	1.9
16	3	3
17	0.4	1.2
18	0	1.5
19	0	0
20	0	0
21	0.8	0
22	0.8	1.7
23	3	3
24	3	3
25	2.9	0
26	3	3
27	0	0
28	0	0
29	0	0
30	2.2	0
31	0	0.5
32	2.2	2.3
33	0.6	0.5
34	1.9	1.9
35	1.7	1.5
36	1.7	1.5
37	2.2	1.5
38	0	1.5
39	0	0
40	0	0
41	0	0
42	0	0
43	1.5	1.5
44	1.2	1.2
45	1.1	1.1
46	0	0.7
47	1.2	1.2
48	1.8	1.8
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0
54	1.5	1.5
55	3	3
56	3	3
57	3	2.9
58	3	2.9
59	2.5	0
60	2.4	0
61	0	0
62	2.5	0
63	1.9	2
64	0	0.7

<PRE/REC>

MODE PIN NO.	REC	PLAY
IC3501		
1	3	0
2	2.5	0
3	3	3
4	0	0
5	0	0
6	0	3
7	2.6	2.3
8	0	0.4
9	0	0
10	0.5	0
11	2.6	0.6
12	0.4	0
13	2.6	2.6
14	3	3
15	0.4	0.6
16	0	0
17	0	0
18	0.4	0
19	4.8	4.8
20	1.1	1.3
21	0.6	0.7
22	2.5	2.1
23	0	0
24	0	1
25	3	2.9
26	3	0
27	0	0
28	0	1.8
29	-0.8	0.5
30	4.6	4.8
31	4.8	0.5
32	-0.5	1.8
33	0	0
34	0	0
35	3	3
36	1.9	1.1
37	0	0
38	2.5	2.1
39	0.7	0.8
40	1.3	1.3
41	0	0
42	0	0
43	3	0
44	0	3
45	1.5	1.5
46	3	3
47	0	3
48	2.9	0
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0
54	0	0
55	0.5	2.2
56	0	0
57	2.6	1.1
58	3	2.2
59	3	1.9
60	3	3
61	2.5	1.8
62	3	2.4
63	0	0
64	1.6	1
Q3501		
E	0	0
C	0	0
B	0.5	0.7
Q3502		
E	0	0
C	0	0
B	-1.3	0.7
Q3503		
E	0	0
C	0	0
B	-1.1	0.7
Q3504		
E	0	0
C	1.7	1
B	0.7	0.7
Q3505		
E	4.8	4.8
C	4.8	0.5
B	4.1	4.8
Q3506		
E	0	0
C	0	4.8
B	3	0

<V OUT>

MODE PIN NO.	REC	PLAY
IC3701		
1	2.2	2.2
2	2.4	2.4
3	4.8	4.8
4	0	1.8
5	0	0
6	4.8	4.8
Q3701		
1	0.6	0.6
2	1.2	1.2
3	2.8	2.8
4	0.5	0.6
5	1.2	1.2
6	0	0
Q3702		
E	2.2	2.2
C	4.7	4.7
B	2.7	2.8
Q3703		
E	3.2	3.2
C	0	0
B	2.6	2.6
Q3704		
1	-0.6	-0.6
2	0	0
3	4.8	4.8
4	0	0
5	0	0.6
6	0	4.8
Q3705		
1	0.6	0.6
2	0	0
3	-4.6	-4.6
4	0	0
5	-0.6	-0.6
6	-4.6	-4.6
Q3706		
1	0	0
2	0	0
3	4.8	4.8
4	0	0
5	0.6	0.6
6	4.8	0
Q3707		
1	0.6	0.6
2	0	0
3	-4.6	-4.6
4	0	0
5	-0.6	-0.6
6	0	-4.6
Q3708		
E	0.6	0
C	0	3.7
B	1.2	1.2
Q3709		
E	3.1	3.1
C	4.7	4.8
B	3.7	3.7
Q3710		
E	0	0
C	4.4	4.3
B	0	0
Q3711		
E	4.8	4.8
C	0	0
B	4.4	4.4

<CAMERA DSP>

MODE PIN NO.	REC	PLAY
IC4201		
1	0	0
2	1.5	3
3	1.5	3
4	1.5	0
5	1.4	0
6	1.5	0
7	1.6	3
8	1.4	0
9	1.7	0
10	0.6	0
11	0	0
12	0	0
13	0	0
14	0	0
15	3	3
16	1.3	0
17	2.9	0
18	2.4	0
19	2.4	0
20	0	0
21	0	3
22	0	0
23	1.7	1.4
24	1.5	0
25	0	0
26	3	3
27	1.5	1.5
28	0	0
29	0	0
30	0	0
31	3	3
32	1.1	1.2
33	1.5	1
34	1.9	0.7
35	1.2	0
36	0	0
37	0	0
38	3	3
39	0	0
40	0	0
41	3	3
42	0	0
43	3	3
44	3	3
45	2.9	2.9
46	3	3
47	0	0
48	0	0
IC4202		
1	4.8	0
2	0	0
3	1.2	0
4	3	3
5	4.8	4.8
IC4302		
1	0	0
2	1.3	1.1
3	1.4	1.1
4	1.3	1.4
5	1.3	1.3
6	1.3	1.2
7	1.4	1.2
8	1.3	1.5
9	0	0
10	0	0
11	0	0
12	0	0
13	2.6	2.6
14	3	3
15	1.7	1.6
16	1.3	1.3
17	3	3
18	1.6	1.6
19	1.2	0
20	0	0
21	1.6	0
22	1.3	1.1
23	3	3

MODE PIN NO.	REC	PLAY
24	1.6	1.5
25	1.6	1.5
26	0	0
27	1.5	1.9
28	1.5	1.1
29	3	3
30	2.3	2.1
31	0	0.6
32	3	2.9
33	0	0
34	2.7	2.7
35	0	0
36	0	0
37	0	0
38	1.3	1.5
39	0.6	0.5
40	2	0
41	-	1
42	0	1.9
43	1.4	0
44	1.3	1.1
IC4303		
1	3	3
2	0	0
3	1.2	1.2
4	2.5	2.5
5	2.9	3
Q4302		
1	0.8	0
2	0.8	0.8
3	0	0
4	0	0
5	0	0
6	0	0
Q4306		
E	1.1	1.1
C	0	0
B	0	0.4

<IRIS & AF/ZOOM>

MODE PIN NO.	REC	PLAY
IC4802		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC4803		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC4804		
1	2.1	3.6
2	2.1	2.2
3	2.2	2.2
4	0	0
5	-	-
6	-	-
7	-	-
8	-	-
IC4805		
1	0	0
2	1.3	2.6
3	1.3	0
4	0	0
5	2	1.9
6	2	1.9
7	2	1.9
8	4.8	0

MODE PIN NO.	REC	PLAY
IC4851		
1	0	0
2	0.5	0.5
3	0	0
4	0	0
5	0	0.4
6	0	0
7	0	0
8	3	3
9	6.6	6.6
10	0.4	1.2
11	0	0
12	0.4	1.3
13	6.6	6.6
14	0.4	1.3
15	0	0
16	0.4	1.3
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	6.6	6.6
24	0	0
25	0	0
26	0	0
27	6.6	6.6
28	0	0
29	0	0
30	-	0
31	3	3
32	0	0
33	0	0
34	3	3
35	3	3
36	1.5	1.5
37	1.5	1.4
38	3	3
Q4803		
E	0.4	0.4
C	1.8	1.8
B	1	1
Q4851		
E	0	0
C	3.5	3.5
B	0	0

<TG/VDR>

MODE PIN NO.	REC	PLAY
IC5501		
1	1.2	1.2
2	2.4	0
3	2.9	0
4	3	3
5	0	0
6	3	3
7	0	0
8	0.6	0
9	0	0
10	2.9	3
11	1.4	0
12	2.9	2.9
13	0	0
14	1.2	0
15	0	0
16	2.9	3
17	2.4	0
18	2.4	0
19	2.4	0
20	0	0
21	0	0
22	2.9	3
23	0	0
24	3	3
25	3	0

MODE PIN NO.	REC	PLAY
26	0	3
27	0	0
28	1.2	1.8
29	0	0
30	1.3	1.6
31	0	0
32	0	0
33	3	3
34	1.5	0
35	1.3	0
36	2.9	3
37	2.9	0
38	3	3
39	0	0
40	0	0
41	-6.2	0
42	0	12.1
43	12.1	12.2
44	-6.2	12.1
45	-6.3	12.1
46	-6.6	-6.7
47	0	0
48	2.9	0

<REG>

MODE PIN NO.	REC	PLAY
IC6001		
1	2.2	2.2
2	1.2	1.2
3	2.2	2.2
4	0	0
5	6.6	6.7
6	0	1
7	1.3	1.3
8	2.2	0
9	0	0
10	0	0
11	0.7	0.7
12	1	1
13	1	1
14	0.7	0
15	0	0
16	0	0
17	0	0.6
18	1	1
19	1.2	1.2
20	0.9	1
21	1	1
22	1	0.9
23	1	1
24	1	1
25	0.9	1
26	0.9	0
27	0	0
28	1	1
29	0	0
30	2.4	2.4
31	0.7	0.8
32	0.8	0.8
33	6.6	6.7
34	6.7	6.7
35	2.9	3
36	3	3
37	0	0
38	4.7	4.7
39	3.4	3.4
40	2.8	2.8
41	0	0
42	1.6	1.7
43	1	1.1
44	5.6	5.7
45	4.4	4.4
46	2.7	2.7
47	0	0
48	2.2	2.2

MODE PIN NO.	REC	PLAY
IC6301		
1	6.6	6.6
2	6.4	6.4
3	0	0
4	0	0
Q6111		
G	3.4	3.4
D	3	3.1
S	6.6	6.6
Q6121		
G	1.6	1.6
D	4.9	4.9
S	6.6	6.6
Q6123		
E	4.8	4.8
C	0	0
B	4.8	4.8
Q6124		
E	0	0
C	4.8	4.8
B	0	0
Q6131		
G	4.7	4.7
D	1.8	1.8
S	6.6	6.6
Q6132		
E	0	0
C	0	0
B	3	3
Q6141		
G	5.6	5.7
D	0.9	1
S	6.6	6.7
Q6151		
G	4.4	4.4
D	0	2.1
S	0.6	6.6
Q6161		
G	2.7	2.7
D	0	0
S	6.6	6.6
Q6162		
1	4.3	4.3
2	4.8	4.8
3	14.8	14.8
4	4.3	4.3
5	4.8	4.8
6	15.4	15.4
Q6163		
E	15.4	15.4
C	12.1	12.1
B	14.8	14.8
Q6165		
1	-6.1	-6.2
2	6.6	-6.7
3	-13	0
4	-6.1	-6.2
5	-6.6	-6.7
6	-15.5	-15.5
Q6166		
E	-13.6	-15.5
C	0	-6.7
B	13	-15.2
Q6167		
E	-14.8	-14.8
C	-15.5	-15.5
B	-15.5	-15.4
Q6168		
E	0	0
C	15.4	15.4
B	-0.8	-0.8
Q6201		
E	6.7	6.7
C	6.6	0
B	6	6.7
Q6202		
E	5.3	0
C	6.7	6.7
B	5.6	0

MODE PIN NO.	REC	PLAY
Q6203		
E	0	0
C	0	6.6
B	0.6	0
Q6301		
E	0	0
C	0	0
B	3	3
Q6302		
G	0	0
D	6.3	6.4
S	0	0
Q6303		
G	3	3
D	0	0
S	3.8	3.8
Q6304		
G	6.6	6.6
D	0	0
S	0	0
Q6305		
G	0	0
D	6.6	6.7
S	6.6	6.7

<LCD BL>

MODE PIN NO.	REC	PLAY
IC751		
1	4.7	4.7
2	113.9	0
3	0	0
4	24	2.7
5	23.9	2.7
6	1.6	0
7	1.6	0
8	0	0
9	3	0
10	3	3
Q7501		
E	0	0
C	4.6	4.6
B	0	0
Q7502		
E	0	0
C	4.6	4.6
B	0	0
Q7503		
E	4.7	4.7
C	4.6	4.6
B	0	0
Q7504		
E	0	0
C	0	0
B	0.6	0.7
Q7505		
E	0	0
C	0	0
B	0	0
Q7506		
E	0	0
C	0.7	0.6
B	0	0

<JACK>

MODE PIN NO.	REC	PLAY
IC501		
1	1.9	1.9
2	1.9	1.9
3	0	2
4	0	0
5	1.9	0
6	0	0
7	1.3	0
8	0	4.8
IC502		
1	2.9	2.9
2	0	0
3	4.7	4.7
Q501		
E	0	0
C	0	0
B	2.7	0
Q502		
E	0	0
C	4.3	4.3
B	-	-

<B/W VF>

MODE PIN NO.	EE
IC7101	
1	4.8
2	0
3	0
4	0
5	1
6	6.3
7	2.4
8	0.6
9	1.4
10	0
11	0
12	0
13	4.8
14	7.8
15	4.8
16	0
17	2.4
18	6
19	2
20	9.4
21	0
22	2.6
23	0
24	2.4
25	2.9
26	2.9
27	3.5
28	0
29	11.3
30	2.5
31	0
32	0.4
33	1.2
34	0
35	0
36	0.7
37	0.6
38	0
39	1.3
40	11.5
41	0
42	0
43	4.8
44	4.8
45	2.4
46	0.9
47	0
48	0

<MONITOR>

MODE PIN NO.	EE
IC7601	
1	2.4
2	0
3	2.8
4	2.7
5	3.4
6	4.8
7	2
8	3.3
9	3.4
10	0
11	6.1
12	6.2
13	12.1
14	6.2
15	6.2
16	6.3
17	6.2
18	6.3
19	0
20	0
21	0
22	0
23	2.9
24	2.7
25	0
26	0
27	0
28	0
29	0
30	0.9
31	0.9
32	0.8
33	3
34	0
35	0
36	2.6
37	0.4
38	0
39	0
40	0
41	0
42	0
43	1.5
44	1.7
45	2.5
46	0
47	0
48	2.5
49	0
50	3
51	0
52	3.5
53	0
54	3
55	3
56	2.7
57	0
58	0
59	0
60	2.5
61	2.7
62	2.7
63	0
64	0
IC7603	
1	3
2	0
3	3
4	0
5	3
6	3
7	3
8	3
IC7604	
1	6
2	6.2
3	6
4	6.2
5	6.2
6	0
7	0
8	0
9	0
10	0
11	0
12	6.2
13	5.8
14	6.2
15	6.2
16	12.1
IC7605	
1	0
2	0
3	-4.7
4	0
5	0
6	4.7
7	0
8	12.1
IC7606	
1	0
2	0
3	0
4	3
5	3
IC7607	
1	1.5
2	3
3	0
4	1.4
5	3
Q7602	
E	0
C	0
B	3
Q7603	
E	4.8
C	4.7
B	0
Q7604	
E	4.8
C	2.4
B	4.8
Q7605	
E	4.7
C	2.4
B	4.7
Q7606	
E	4.8
C	2.4
B	4.7
Q7607	
E	-8.9
C	0
B	-8.4
Q7608	
E	-8.6
C	-14.4
B	-8.9
Q7609	
E	0.8
C	12.1
B	1.3
Q7610	
E	1.1
C	-12.9
B	0.8
Q7615	
E	3
C	-13
B	3
Q7616	
E	0
C	0
B	2.9
Q7617	
E	4.7
C	4.7
B	0
Q7618	
E	0
C	0
B	2.9
Q7619	
1	5.5
2	6
3	0
4	6
5	5.5
6	12.1

<CCD>

MODE PIN NO.	EE
IC5001	
1	-6.2
2	-6.2
3	0
4	0
5	0
6	0
7	12.1
8	9.3
9	0
10	10.4
11	1.4
12	1.2
13	7.2
14	0
Q5001	
E	8.6
C	12.1
B	9.3

<B/W VFIF>

MODE PIN NO.	EE
Q7201	
E	0.8
C	1.7
B	1.5

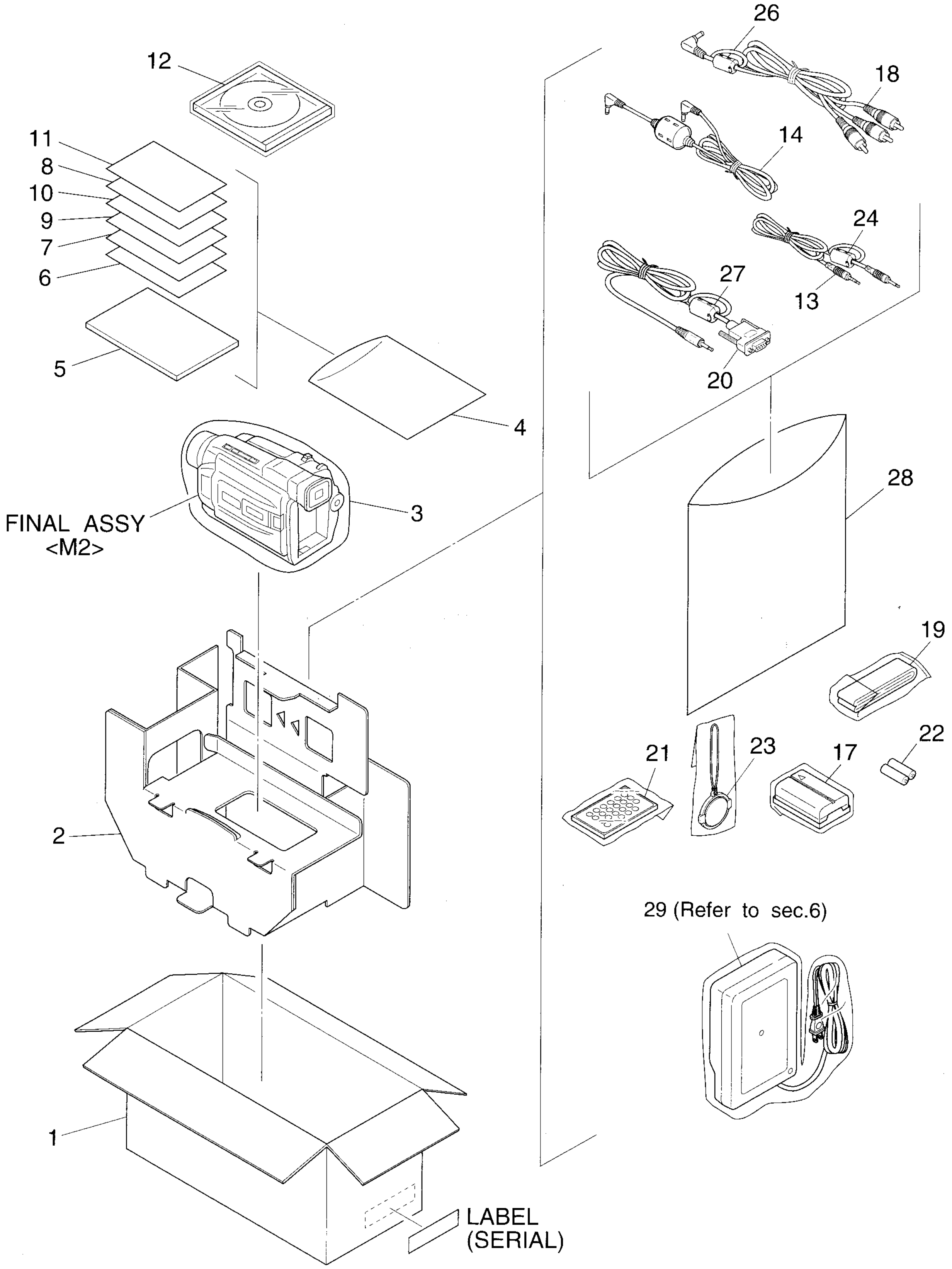
SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING ASSEMBLY <M1>

The instruction manual to be provided with this product will differ according to the destination.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28
FINAL ASSY
<M2>
3
19
22
21
23
17
2
29 (Refer to sec.6)
1
LABEL
(SERIAL)

* *

PACKING ASSEMBLY <M1>

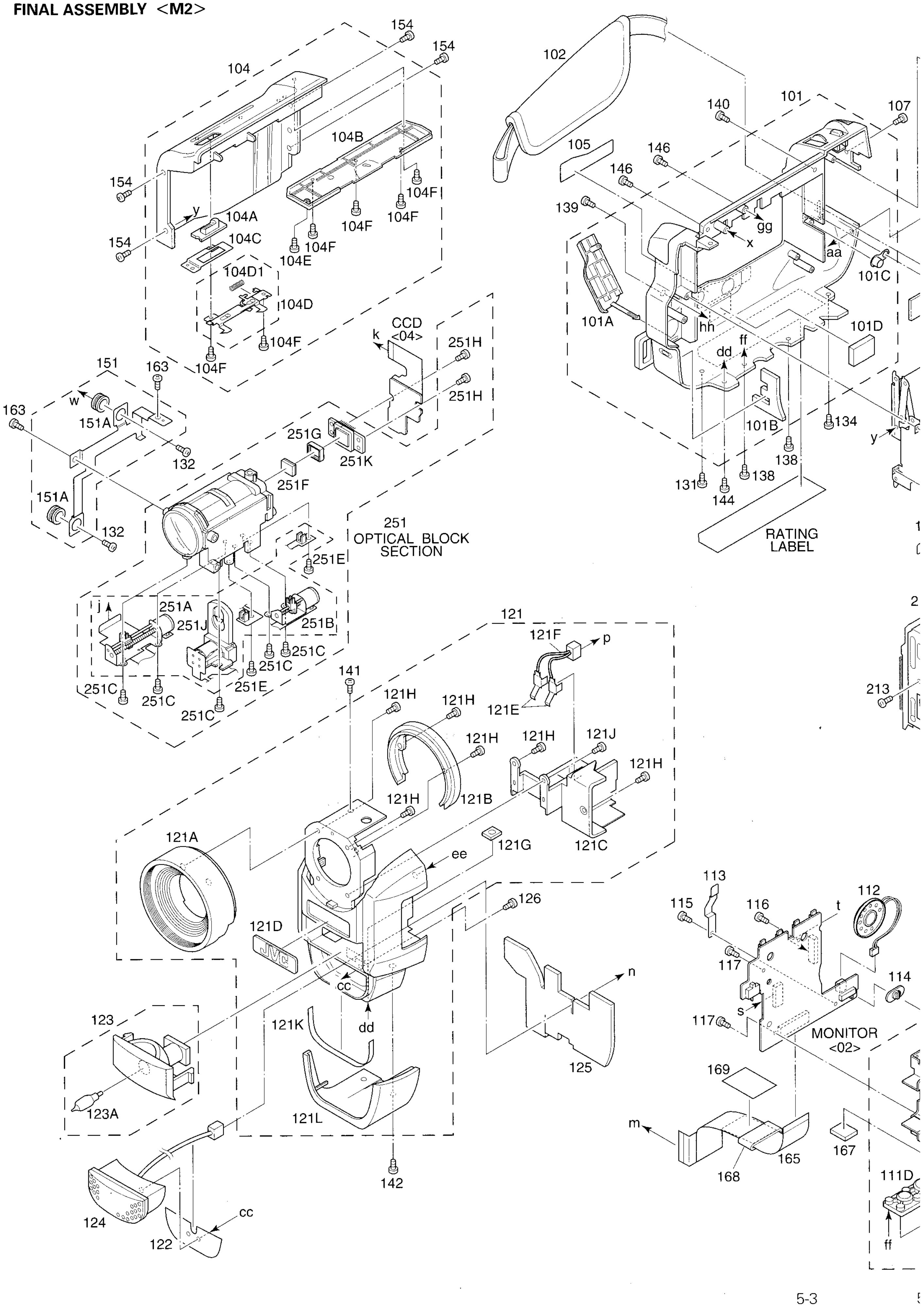
# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	1	LY31631-001A	PACKING CASE,E
		LY31631-003A	PACKING CASE,F
		LY31631-005A	PACKING CASE,B
		LY31752-001A	PACKING CASE,D
		LY31752-002A	PACKING CASE,A
		LY31752-003A	PACKING CASE,C
	2	LY31632-001A	CUSHION,B,E,F
		LY31735-001A	CUSHION,A,C,D
	3	LY30023-015A	POLY BAG
	4	QPA02003006	POLY BAG
⚠	5	LYT0534-001A	IB(EN),B,E
⚠		LYT0534-002A	IB(FR),B,E
⚠		LYT0535-001A	IB(EN),D,F
⚠		LYT0535-002A	IB(FR),D,F
⚠		LYT0558-001A	IB(EN),A
⚠		LYT0558-002A	IB(FR),A
⚠		LYT0560-001A	IB(EN),C
⚠		LYT0560-002A	IB(FR),C
⚠	6	LYT0531-001A	IB(SOFT.SETUP),B,E,F
⚠	7	LYT0531-002A	IB(SOFT.OPE.EN),B,E,F
	8	LYT0378-003A	SHEET(AGREMENT),B,E,F
	9	YU10350	Q.CARD(JCA)
	10	BT-51005-4	WARRANTY INF.
	11	BT-51020-2	REGIST.CARD
	12	LY31133-009A	CD ROM ASSY,B,E,F
	13	QAM0214-001	RM CABLE,EDITING CABLE
	14	QAM0170-001	DC CORD
⚠	17	LY31587-001A	BATTERY PACK,BN-V408U
	18	QAM0211-001	CABLE ASSY,AUDIO/VIDEO CABLE
	19	LY20186-001A	SHOULDER STRAP
	20	QAM0084-001	PC CONNECTION CABLE,B,E,F
	21	LY20543-002A	REMOTE CONTROL UNIT,B,E,F
		LY42129-001A	REMOTE CONTROL UNIT,A,C,D
	22	–	BATTERY,AAA(R03),X2
	23	LY42182-001A	LENS CAP
	24	QQR0491-002	CORE FILTER
	26	QQR0918-002	CORE FILTER
	27	QQR0491-002	CORE FILTER
	28	QPGA017-03005	POLY BAG
⚠	29	LY20591-001B	AC POWER ADAPTER CHARGER, AA-V40U

- **INSTRUCTIONS**

EN .... ENGLISH
FR .... FRENCH

MODEL	MARK
GR-DVL100U	A
GR-DVL300U	B
GR-DVL305U	C
GR-DVL307U	D
GR-DVL500U	E
GR-DVL507U	F

5.2 FINAL ASSEMBLY <M2>


154
154
104
104B
154
154
y
104A
104C
104F
104F
104F
104F
104E
104D1
104D
104F
104F
102
101
140
107
105
146
146
139
gg
x
aa
101C
101A
hh
dd
ff
101D
101B
134
y
138
138
131
144
RATING LABEL
CCD <04>
k
251H
251H
151
163
w
163
151A
132
251G
251K
251F
151A
132
251
OPTICAL BLOCK SECTION
251E
j
251A
251J
251B
251C
251C
251C
251E
251C
251C
251C
121
121F
p
121E
141
121H
121H
121H
121H
121J
121H
121B
121H
121C
121A
121G
ee
126
213
121D
cc
n
121K
dd
113
115
116
t
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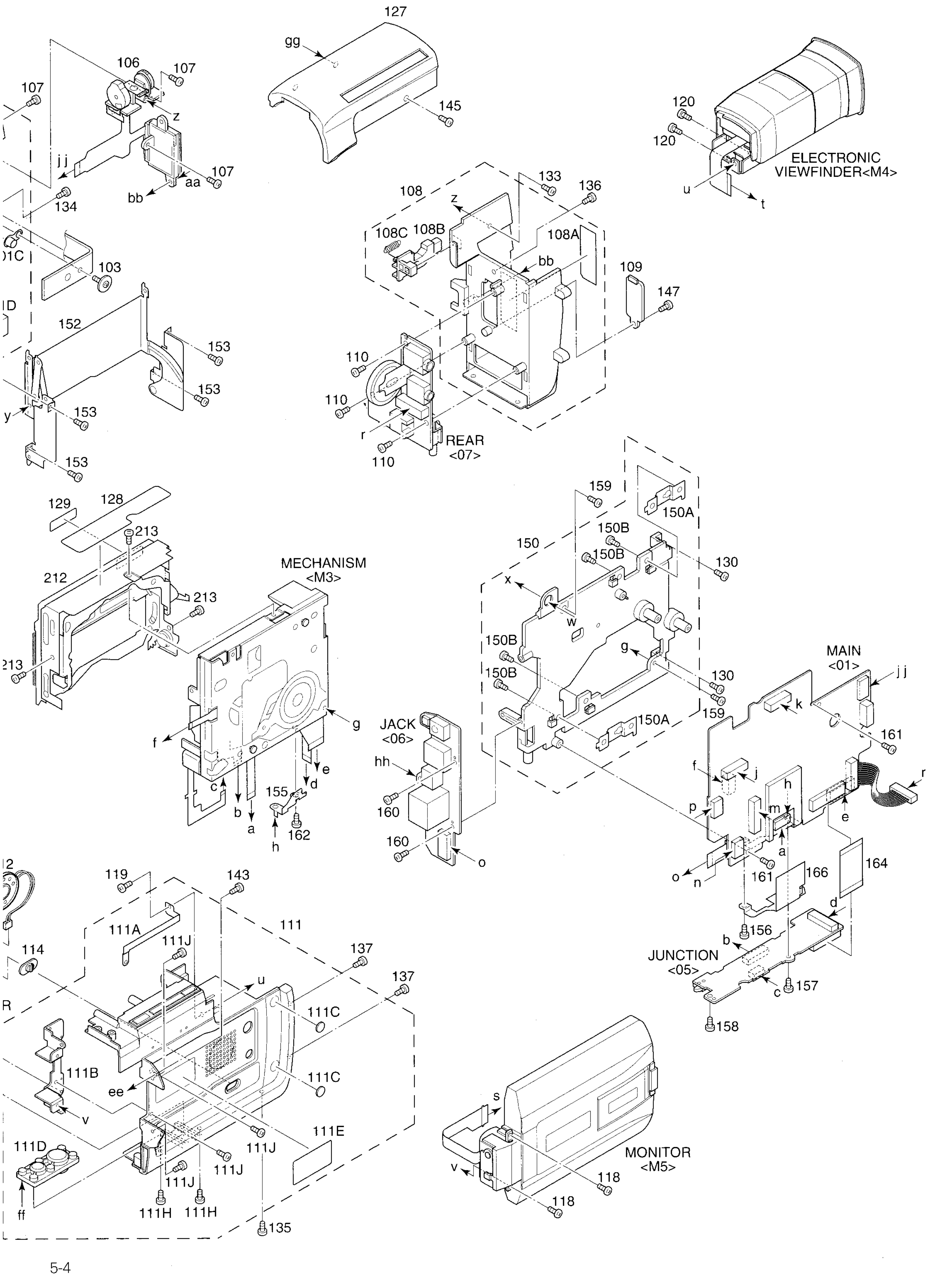
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111J
ff
111H
111H
135
s
MONITOR
<M5>
v
118
118

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION

****

FINAL ASSEMBLY <M2>

⚠ 101	LY20560-001B	LOWER CASE ASSY
101A	LY31607-001A	JACK COVER
101B	LY42391-001A	SHEET(MIC)2
101C	LY40592-001A	CAP(GRIP BELT)
101D	LY30029-052A	SPACER(A)
102	LY20575-001B	GRIP BELT
103	LY30018-003A	SPECIAL SCREW
104	LY31609-001A	CASS.COVER ASSY
104A	LY31610-001A	KNOB(EJECT)
104B	LY31611-001A	COVER(C.C)
104C	LY42173-001A	BKT(E.KNOB)
104D	LY42174-001A	LOCK ASSY
104D1	LY30002-038A	COMPRES. SPRING
104E	LY30018-084A	SPECIAL SCREW
104F	LY30018-023A	SPECIAL SCREW,X6
105	LY42177-001B	SHEET(M.ADJ)
106	LY20542-001A	ZOOM UNIT
107	LY30018-084A	SPECIAL SCREW,X3
108	LY31596-001A	REAR COVER ASSY
108A	LY42161-001A	SHEET(REAR)
108B	LY31595-001A	KNOB(RELEASE)
108C	LY30001-018A	TENSION SPRING
109	LY41691-001A	COVER(JIG)
110	LY30018-084A	SPECIAL SCREW,X3
111	LY20550-001A	UPPER CASE(3)ASSY,E,F
	LY20550-003A	UPPER CASE(3)ASSY,D
	LY20557-001A	UPPER CASE(2.5)ASSY,B
	LY20557-002A	UPPER CASE(2.5)ASSY,A,C
111A	LY31599-001A	SHEET(EARTH)
111B	LY31623-001A	BRACKET
111C	LY40664-002A	SPACER,X2
111D	LY31019-001A	BASE
111E	LY42244-001A	SHEET(MARK)
111H	LY30018-084A	SPECIAL SCREW,X2
111J	LY30018-0A8A	SPECIAL SCREW,X4
112	QAS0048-001	SPEAKER
113	LY42167-001A	PLATE(SPK)
114	LY42168-001A	KNOB(SLIDE)
115	LY30018-023A	SPECIAL SCREW
116	LY30018-0A5A	SPECIAL SCREW
117	LY30018-0A8A	SPECIAL SCREW,X2
118	LY30018-090A	SPECIAL SCREW,X2
119	LY30018-038A	SPECIAL SCREW
120	LY30018-084A	SPECIAL SCREW,X2
121	LY20563-001B	FRONT COVER ASSY
121A	LY31615-001B	HOOD
121B	LY31616-001A	RING
121C	LY20572-001A	HOLDER(L.CONT.)
121D	LY40987-003B	MARK
121E	YQ43810-1-1	CONTACT(LIGHT),X2
121F	WJM0003-006A	E-SI C WIRE C-F
121G	YQ44434	BRACKET
121H	LY30018-0A7A	SPECIAL SCREW,X6
121J	LY30018-079A	SPECIAL SCREW
121K	LY30029-042A	SPACER(A)
121L	LY31614-001A	COVER(BOTTOM)
122	LY42184-001A	PLATE(MIC)
123	LY31617-001A	DC LIGHT ASSY
123A	YQ44266	LAMP
124	LY30861-012A	MICROPHONE
125	LY42390-001A	SHEET(MIC)1

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
126	QYSLSF2055D	SPECIAL SCREW
127	LY20552-001A	TOP COVER(3),E
	LY20552-002A	TOP COVER(3),D
	LY20552-003A	TOP COVER(3),F
	LY20559-001A	TOP COVER(2.5),A
	LY20559-002A	TOP COVER(2.5),B
	LY20559-003A	TOP COVER(2.5),C
128	LY40698-002A	LABEL(HOUSING)
129	LY40699-002A	LABEL(PUSH)
130	LY30018-079A	SPECIAL SCREW,X2
131	LY30018-084A	SPECIAL SCREW
132	LY30018-050A	SPECIAL SCREW,X2
133	LY30018-079A	SPECIAL SCREW
134	LY30018-079A	SPECIAL SCREW,X2
135	LY30018-079A	SPECIAL SCREW
136	LY30018-084A	SPECIAL SCREW
137	LY30018-023A	SPECIAL SCREW,X2
138	LY30018-084A	SPECIAL SCREW,X2
139	LY30018-096A	SPECIAL SCREW
140	LY30018-066A	SPECIAL SCREW
141	LY30018-084A	SPECIAL SCREW
142	LY30018-079A	SPECIAL SCREW
143	LY30018-059A	SPECIAL SCREW
144	LY30018-044A	SPECIAL SCREW
145	LY30018-059A	SPECIAL SCREW
146	LY30018-052A	SPECIAL SCREW,X2
147	LY30018-037A	SPECIAL SCREW
150	LY31618-001A	HOLDER(MECHA)ASSY
150A	LY42178-001A	BKT(MECHA),X2
150B	LY30018-056A	SPECIAL SCREW,X4
151	LY42179-001A	BKT(OP)ASSY
151A	LY41675-001A	RUBBER,X2
152	LY31612-001A	ARM ASSY
153	LY30018-084A	SPECIAL SCREW,X4
154	LY30018-066A	SPECIAL SCREW,X4
155	LY40709-001C	BRACKET(GRD)
156	YQ43893-3	MINI SCREW
157	YQ43893-3	MINI SCREW
158	LY30018-023A	SPECIAL SCREW
159	LY30019-021A	SPECIAL SCREW,X2
160	LY30018-023A	SPECIAL SCREW,X2
161	LY30018-023A	SPECIAL SCREW,X2
162	YQ43893-4	MINI SCREW
163	LY30018-024A	SPECIAL SCREW,X2
164	WJT0028-001A	FFC WIRE,MAIN CN113-JUNC CN571
165	WJT0029-003A	FFC WIRE,MAIN CN101-MONI CN7601
166	LY31657-001A	SHIELD CASE(2)
167	LY30029-057A	SPACER(A)
168	QQR0717-001	FERRITE CORE
169	LY30029-058A	SPACER(A)
212	LY30483-001Q	CASSETTE HOUSING ASSY
213	YQ43893-4	MINI SCREW,X3

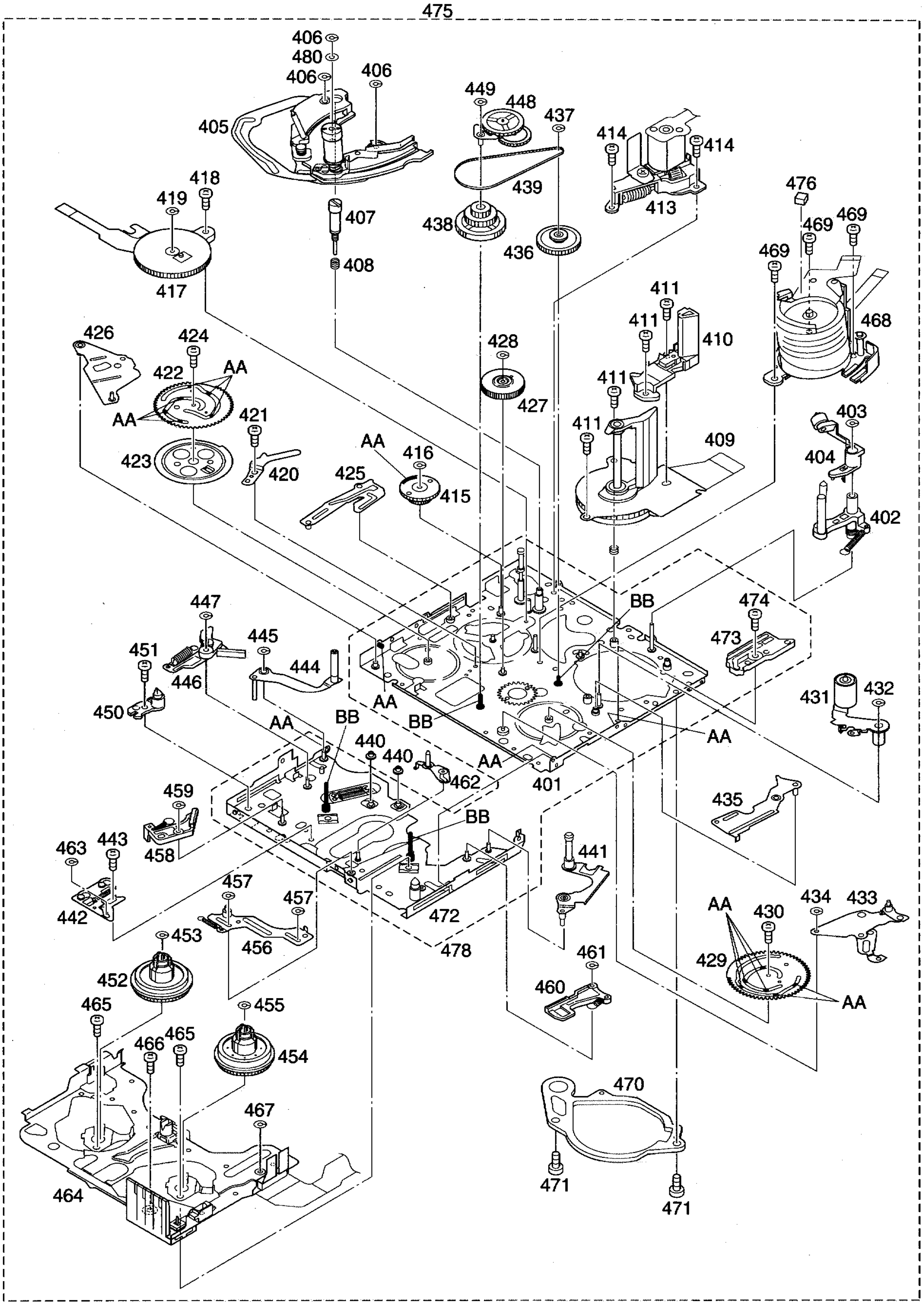
– OPTICAL BLOCK SECTION –

251	YS20973F	OPTICAL BLOCK ASSY
251A	LY30723-001B	ZOOM MOTOR
251B	LY30724-001B	FOCUS MOTOR
251C	LY30727-002A	SCREW,X5
251E	LY30727-001A	SCREW,X2
251F	LY41718-001A	OPTICAL LPF
251G	LY31639-001A	SPACER RUBBER
251H	QYSPSGU1750Z	SCREW,X2
251J	LY31726-001A	IRIS MOTOR
251K	YS40168E	CCD BASE ASSY

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

5.3 MECHANISM ASSEMBLY <M3>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AA
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Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	YTU94027	BB

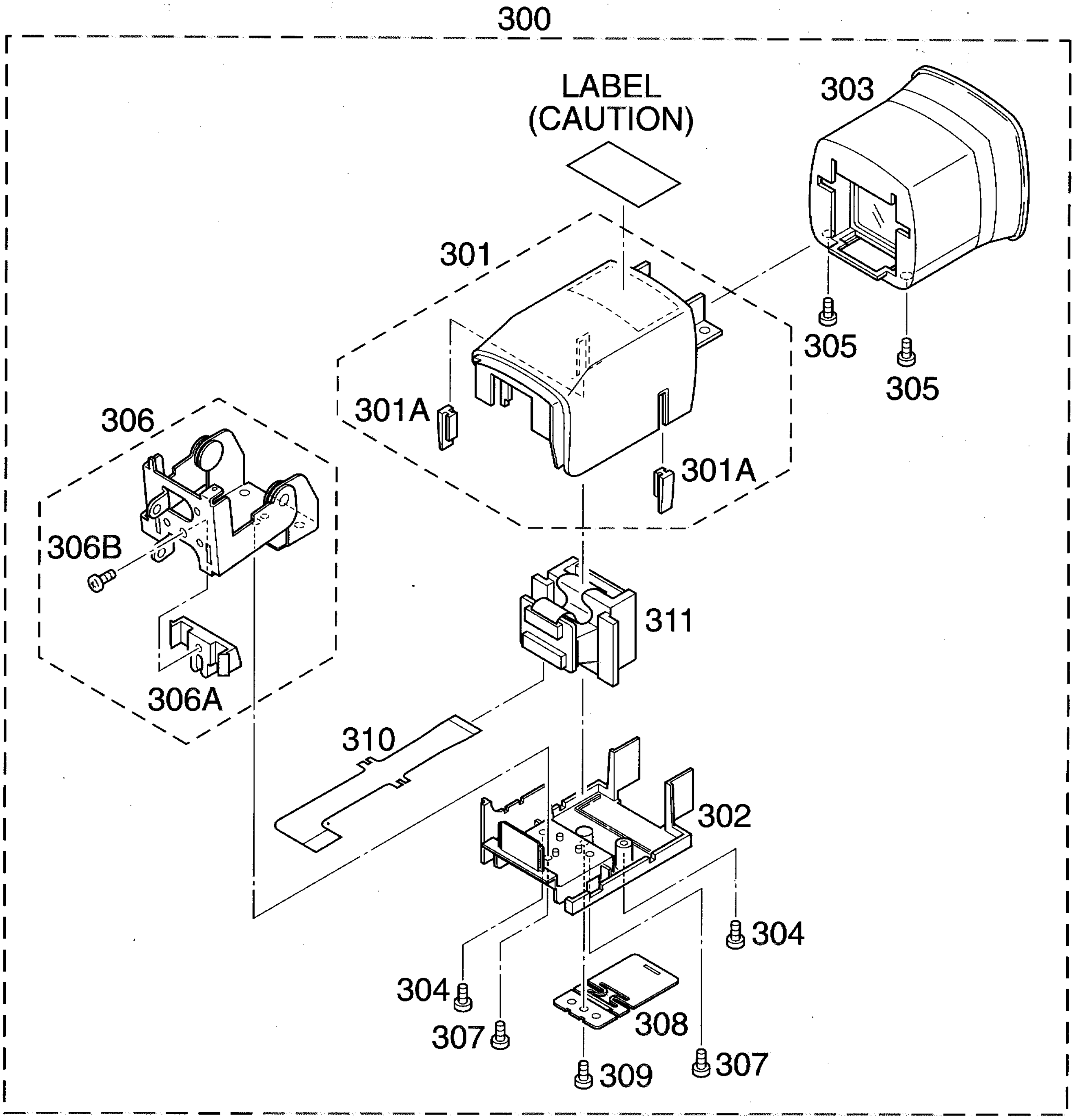
NOTE: The section marked in **AA** and **BB** indicate lubrication and greasing areas.

****

MECHANISM ASSEMBLY <M3>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
401	LY10077-001L	MAIN DECK ASSY
402	LY30436-001F	SLANT P.ARM ASSY
403	YQ44246	SLIT WASHER
404	LY30438-001B	CLEANER ARM ASSY
405	LY10080-001V	RAIL ASSY
406	YQ44246	SLIT WASHER,X3
407	LY40353-001D	GUIDE ROLLER(S)ASSY
408	LY30002-006C	COMPRES. SPRING
409	QAR0026-001	CAPSTAN MOTOR
410	LY30504-001C	CATCHER(T)ASSY
411	YQ43893	MINI SCREW,X4
413	LY30448-001D	MOTOR BKT ASSY
414	YQ43893	MINI SCREW,X2
415	LY30449-001C	WORM WHEEL
416	YQ44246	SLIT WASHER
417	LY40496-001C	ROTARY ENCODER
418	YQ43893	MINI SCREW
419	YQ44246	SLIT WASHER
420	LY40614-001B	GEAR HOLDER
421	YQ43893-6	MINI SCREW
422	LY30450-001C	MAIN CAM
423	LY30840-001A	BRAKE CTL PLATE
424	YQ43893	MINI SCREW
425	LY40373-001C	TC LEVER ASSY
426	LY30452-001E	SLIDE LEVER ASSY
427	LY30454-001A	CONNECT GEAR
428	YQ44246	SLIT WASHER
429	LY30455-001B	SUB CAM
430	YQ43893	MINI SCREW
431	LY30456-001F	PINCHROLLER ARM ASSY
432	YQ44246	SLIT WASHER
433	LY30459-001A	CHARGE ARM ASSY
434	YQ44246	SLIT WASHER
435	LY40387-001B	BC LEVER ASSY
436	LY40389-001D	R.D.PULLEY ASSY
437	YQ44246-2	SLIT WASHER
438	LY40391-001G	CENTER GEAR ASSY
439	LY40396-001A	TIMING BELT
440	LY40413-001A	COLLAR,X2
441	LY30468-001E	GUIDE ARM ASSY
442	LY30618-001C	SLIDE GUIDE PLATE ASSY
443	YQ43893-2	MINI SCREW
444	LY40420-001J	TENSION ARM ASSY
445	YQ44246	SLIT WASHER
446	LY30471-001D	PAD ARM ASSY
447	YQ44246	SLIT WASHER
448	LY40432-001H	IDLER ARM ASSY
449	YQ44246-2	SLIT WASHER
450	LY30476-001A	GUIDE PIN(S)
451	YQ43893	MINI SCREW
452	LY40441-001B	REEL DISK(SUPPLY)ASSY
453	YQ44246	SLIT WASHER
454	LY40443-001B	REEL DISK(TAKE-UP)ASSY
455	YQ44246	SLIT WASHER
456	LY30477-001F	CTL PLATE ASSY
457	YQ44246	SLIT WASHER,X2
458	LY40444-001E	LOADING BRAKE ASSY
459	YQ44246	SLIT WASHER
460	LY40452-001C	SUB BRAKE ASSY
461	YQ44246	SLIT WASHER
462	LY30479-001B	RELEASE GUIDE ASSY
463	YQ44246	SLIT WASHER
464	LY20146-001H	REEL COVER ASSY
465	YQ43893-4	MINI SCREW,X2
466	YQ43893	MINI SCREW
467	YQ44246	SLIT WASHER
468	YDV2086I	DRUM ASSY
469	YQ43893	MINI SCREW,X3
470	LY20138-001D	PWB HOLDER
471	YQ43893	MINI SCREW,X2
472	LY10082-001K	SLIDE DECK ASSY
473	LY30462-001B	LOADING GUIDE
474	YQ43893	MINI SCREW
475	YMA0025H	MECHA(A) ASSY
476	LY30016-0M1A	SPACER-A
478	LY30496-001S	DECK ASSY
480	LY41573-001A	WASHER

5.4 ELECTRONIC VIEWFINDER ASSEMBLY <M4> [GR-DVL305U/500U]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306B
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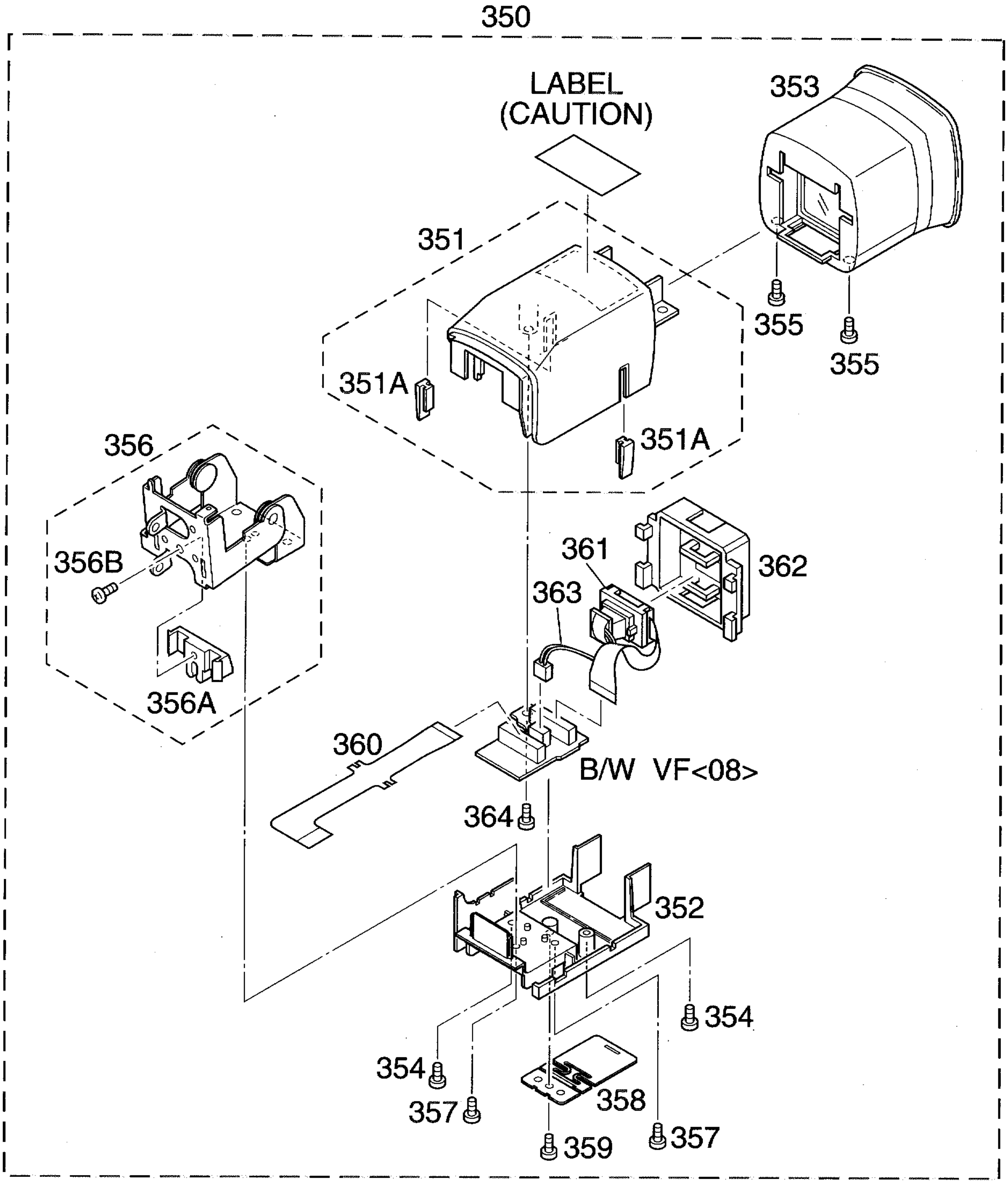
308
309
307

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
******************************		
ELECTRONIC VIEWFINDER ASSEMBLY <M4>		
300	LY20596-001A	COLOR VF UNIT
301	LY31600-001A	VF CASE(UPPER)ASSY
301A	LY42170-001A	GUIDE,X2
302	LY20554-001A	VF CASE(LOWER)
303	LY20555-003A	EYE P.ASSY
304	LY30018-079A	SPECIAL SCREW,X2
305	LY30018-079A	SPECIAL SCREW,X2
306	LY31602-001A	HINGE(VF)ASSY
306A	LY31601-001A	CLIP(VF)
306B	LY30018-023A	SPECIAL SCREW
307	LY30018-066A	SPECIAL SCREW,X2
308	LY31250-001A	CAPACITOR
309	LY30018-063A	SPECIAL SCREW
310	QAL0223-001	FPC
311	PTY20596-051	LCD MODULE

5.4 ELECTRONIC VIEWFINDER ASSEMBLY <M4> [GR-DVL100U/300U/307U/507U]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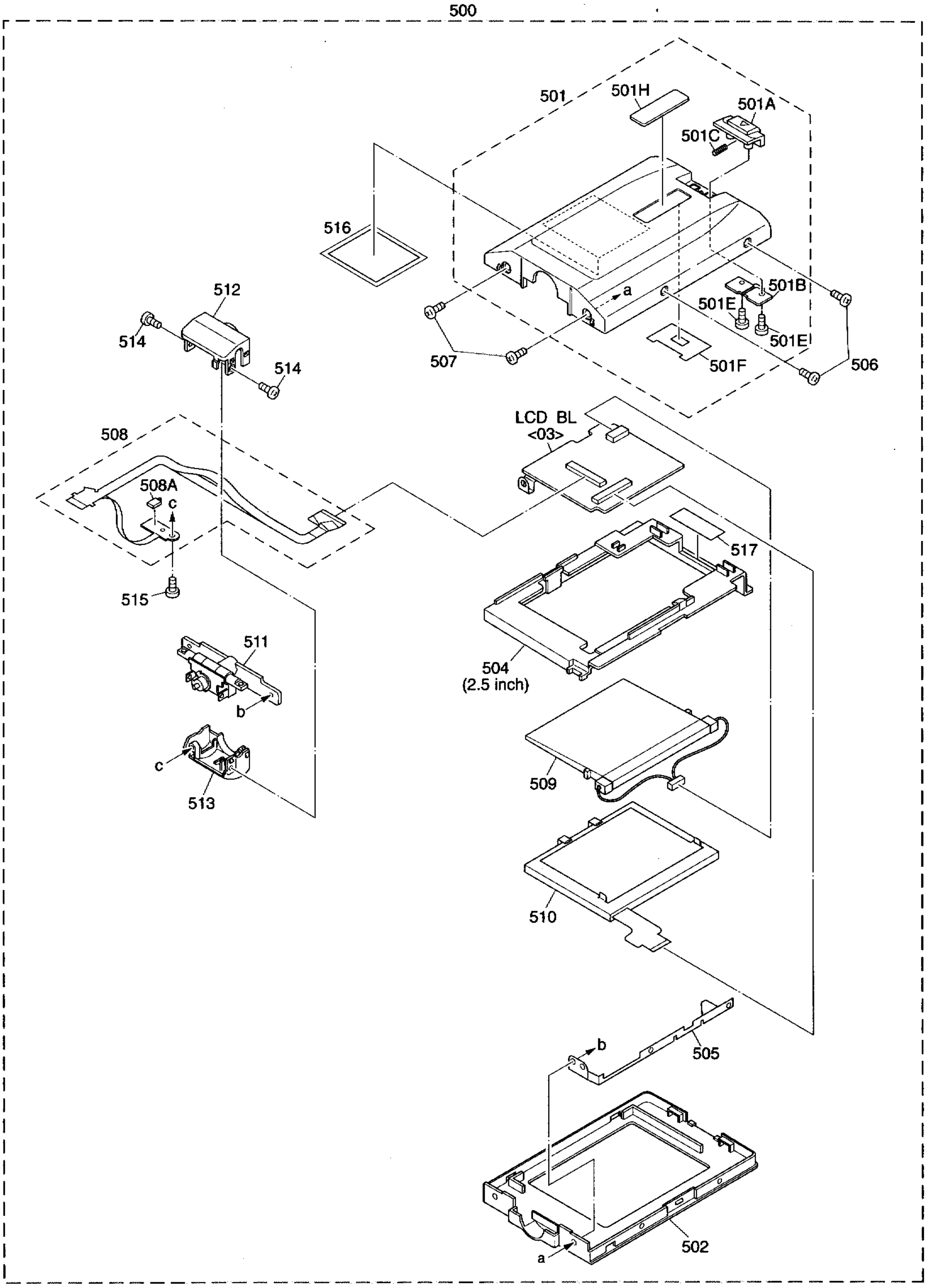
354
357
358
359
357

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
********************************		
ELECTRONIC VIEWFINDER ASSEMBLY <M4>		
350	LYH20136-001A	E.VF ASSY
351	LY31600-001A	VF CASE(UPPER)ASSY
351A	LY42170-001A	GUIDE,X2
352	LY20554-001A	VF CASE(LOWER)
353	LY20555-004A	EYE P.ASSY
354	LY30018-079A	SPECIAL SCREW,X2
355	LY30018-079A	SPECIAL SCREW,X2

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
356	LY31602-001B	HINGE(VF)ASSY
356A	LY31601-001A	CLIP(VF)
356B	LY30018-023A	SPECIAL SCREW
357	LY30018-066A	SPECIAL SCREW,X2
358	LY31250-001A	CAPACITOR
359	LY30018-063A	SPECIAL SCREW
360	QAL0223-002	FPC
361	QLD0133-001	LCD MODULE
362	LY20481-001A	HOLDER(B/W LCD)
363	QLL0067-001	BACK LIGHT
364	LY30018-063A	SPECIAL SCREW

5.5 MONITOR ASSEMBLY <M5> [GR-DVL100U/300U/305U]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501E
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501F
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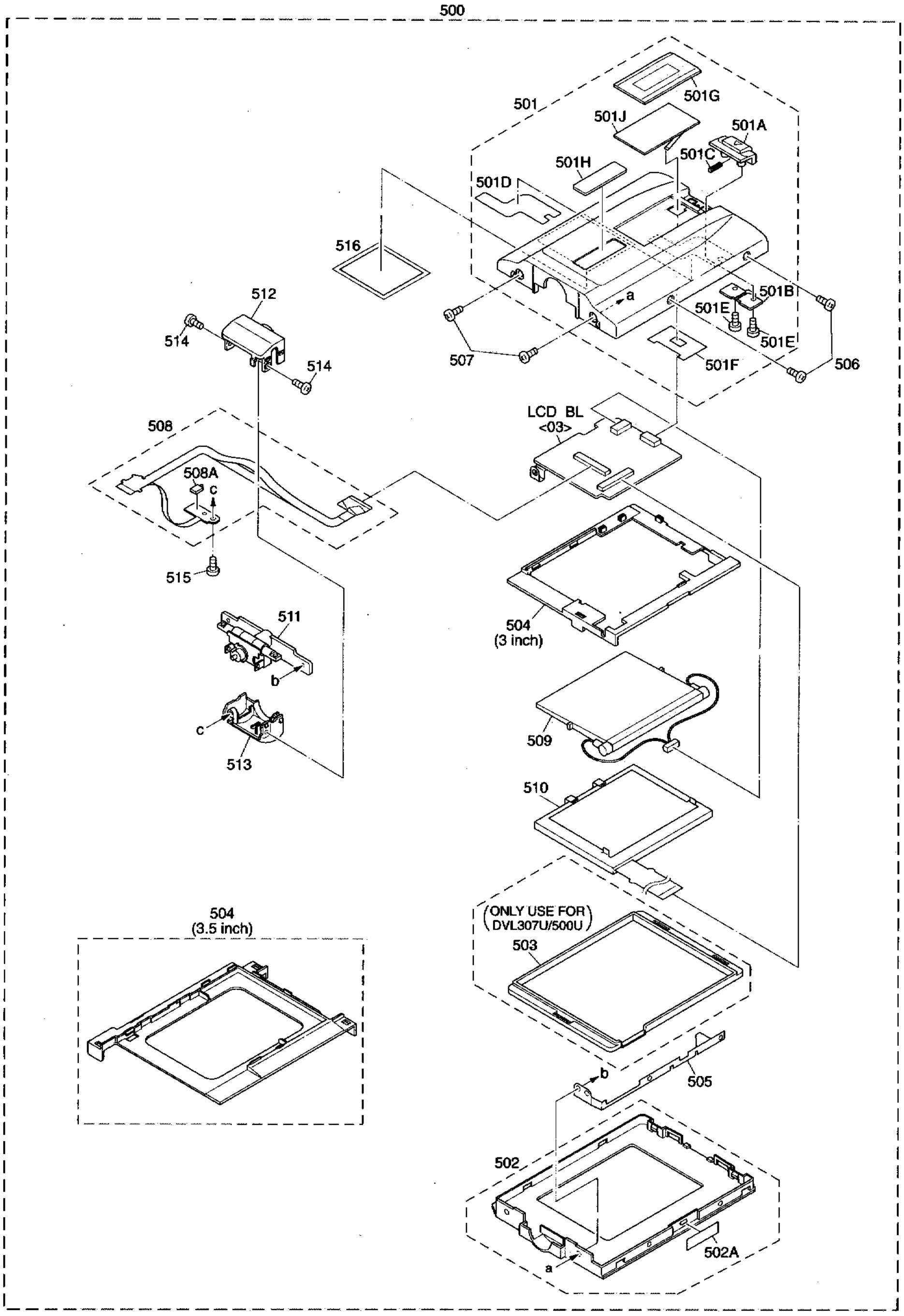
c
517
515
511
b
504
(2.5 inch)
509
c
513
510
b
505
502
a

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
*******************************		
MONITOR ASSEMBLY <M5>		
⚠ 500	LYH20135-003A	MONITOR ASSY
⚠ 501	LY20569-001A	MONITOR COVER ASSY
501A	LY31620-001A	KNOB(LOCK 1)
501B	LY42180-001A	KNOB(LOCK 2)
501C	LY30002-044A	COMPRES. SPRING
501E	LY30018-011A	SPECIAL SCREW,X2
501F	LY42368-001A	SHEET(MON)
501H	LY42162-001A	MARK
502	LY10230-001A	MONITOR CASE(2.5)
504	LY20570-001A	HOLDER(2.5PWB)
505	LY31622-001A	BRACKET(EARTH)
506	QYSPSPT1730R	SCREW,X2
507	QYSLSP2040D	SCREW,X2
508	LY31743-001A	MONI.FPC ASSY
508A	NSW0095-001X	DETECT SWITCH
509	QLL0079-001	BACK LIGHT
510	QLD0130-001	LCD MODULE
511	LY31236-003A	HINGE ASSY
512	LY31624-001A	HINGE COVER(1)
513	LY31625-001A	HINGE COVER(2)
514	LY30018-058A	SPECIAL SCREW,X2
515	LY30018-023A	SPECIAL SCREW
516	LY40559-001A	SHIELD SHEET
517	LY30029-063A	SPACER(A)

5.5 MONITOR ASSEMBLY <M5> [GR-DVL307U/500U/507U]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501B
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501E
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501F
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508A
c
515
511
b
504
(3 inch)
509
c
513
510
504
(3.5 inch)
ONLY USE FOR
DVL307U/500U
503
b
505
502
a
502A

****

MONITOR ASSEMBLY <M5>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
⚠ 500	LYH20135-001B	MONITOR ASSY,D,E
⚠	LYH20135-002B	MONITOR ASSY,F
⚠ 501	LY20565-001A	MONITOR COVER ASSY,D,E
⚠	LY20565-002A	MONITOR COVER ASSY,F
501A	LY31620-001A	KNOB(LOCK 1)
501B	LY42180-001A	KNOB(LOCK 2)
501C	LY30002-044A	COMPRES. SPRING
501D	LY42386-001A	EARTH MON
501E	LY30018-011A	SPECIAL SCREW,X2
501F	LY42368-001A	SHEET(MON)
501G	LY31621-001A	WINDOW
501H	LY42162-001A	MARK
501J	LY42193-001A	EL(WINDOW)
502	LY20598-001A	MONITOR CASE ASSY,D,E
	LY20598-002A	MONITOR CASE ASSY,F
502A	LY42388-001A	EARTH MON(2)
503	LY20566-001A	HOLDER(3LCD),D,E
504	LY20567-001A	HOLDER(3PWB),D,E
	LY20568-001A	HOLDER(3.5PWB),F
505	LY31622-001A	BRACKET(EARTH)
506	QYSPSPT1730R	SCREW,X2
507	QYSLSP2040D	SCREW,X2
508	LY31743-001A	MONI.FPC ASSY
508A	NSW0095-001X	DETECT SWITCH
509	QLL0080-001	BACK LIGHT,D,E
	QLL0081-001	BACK LIGHT,F
510	QLD0096-002	LCD MODULE,F
	QLD0118-001	LCD MODULE,D,E
511	LY31236-003A	HINGE ASSY
512	LY31624-001A	HINGE COVER(1)
513	LY31625-001A	HINGE COVER(2)
514	LY30018-058A	SPECIAL SCREW,X2
515	LY30018-023A	SPECIAL SCREW
516	LY40559-001A	SHIELD SHEET

5.6 ELECTRICAL PARTS LIST

MODEL	MARK	MODEL	MARK
GR-DVL100U	A	GR-DVL307U	D
GR-DVL300U	B	GR-DVL500U	E
GR-DVL305U	C	GR-DVL507U	F

****

MAIN BOARD ASSEMBLY <01>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
PW	YB10277A-01	MAIN BOARD ASSY,E
	YB10277B-01	MAIN BOARD ASSY,D
	YB10277D-01	MAIN BOARD ASSY,A
	YB10277E-01	MAIN BOARD ASSY,B
	YB10277H-01	MAIN BOARD ASSY,F
	YB10277J-01	MAIN BOARD ASSY,C
IC1001	MN102F1617HL-L1	IC(MICRO C ROM)
	or MN1021617FP	IC(MICRO C ROM)
IC1002	MB90097PFV133	IC(MICRO C ROM)
IC1003	AT25160N-10SC-X	IC
	or NM25C160LZEM8	IC
IC1004	RS5C314	IC
IC1009	S-814A30AMC-W	IC
IC1010	IC-PST9323U-X	IC
IC1014	SN74LV08APW	IC
IC1301	SN74LV08APW	IC,B,E,F
IC1302	MAX3221CAE	IC,B,E,F
IC1303	SN74LV02APW	IC
IC1401	MN103004KRH	IC(MICRO C ROM)
	or MN1030F04KYB-A1	IC(MICRO C ROM)
	or MN1030F14KYB-A1	IC(MICRO C ROM)
	or YQ44847A	CSP IC ASSY
	or MN1030F14KYB-A1	IC(MICRO C ROM)
	or YQ44847A	CSP IC ASSY
IC1402	TC7W14FU	IC(DIGITAL)
	or SN74AHC2G14T	IC
IC1403	TC7W66FK	IC
IC1405	TC7W53FU	IC(DIGITAL)
	or SN74AHC2G53T	IC
IC1601	BD6630KV	IC
IC2201	AK4560VQ	IC
IC3001	JCY0106-2	IC
IC3002	M51V18165D50TSK	IC(DIGITAL)
IC3005	SN74AHC1G04K	IC
IC3007	TC7SL00FU	IC(DIGITAL)
IC3101	PDI1394P11ABD	IC
IC3201	JCY0107QP	IC
IC3202	TC7SH00FU	IC(DIGITAL)
IC3301	JCY0108	IC
IC3501	AN3731FHQ	IC(DIGITAL)
IC3701	MM1510XN	IC
IC4201	HD49323AF	IC
IC4202	MM1385HN	IC
IC4301	JCY0120	IC(DIGITAL)
IC4302	MSM548331TA	IC(DIGITAL)
IC4303	MM1385NN	IC
IC4802	TA75W01FU	IC
IC4803	TA75W01FU	IC
IC4804	NJM3414AV	IC
IC4805	MM6564XFBE	IC
IC4851	UPD16879GS	IC
IC5501	JCY0117	IC
IC6001	FA3676F	IC
IC6301	S-80842ANNP-W	IC
Q1002	DTA144EE	TRANSISTOR
	or PDTA144EE	TRANSISTOR
Q1003	DTA114EE	TRANSISTOR
	or PDTA114EE	TRANSISTOR
Q1004	DTC144EE	TRANSISTOR
	or PDTC144EE	TRANSISTOR
Q1008	DTC144EE	TRANSISTOR
	or PDTC144EE	TRANSISTOR
Q1009	DTC144EE	TRANSISTOR
	or PDTC144EE	TRANSISTOR
Q1010	DTA114EE	TRANSISTOR
	or PDTA114EE	TRANSISTOR
Q1301	2SC4617/QR/-X	TRANSISTOR
Q1401	DTA114EE	TRANSISTOR
	or PDTA114EE	TRANSISTOR
Q1402	UMC3N	TRANSISTOR
Q1403	UMC3N	TRANSISTOR
Q1601	UMC3N	TRANSISTOR
Q2201	2SC4617/QR/-X	TRANSISTOR
Q2202	UMX1N	PAIR TRANSISTOR
Q2401	2SC4617/QR/-X	TRANSISTOR
Q2402	2SD1511/R/-X	TRANSISTOR
Q2601	2SA1774/QR/-X	TRANSISTOR
Q2602	2SA1774/QR/-X	TRANSISTOR
Q2603	2SC4617/QR/-X	TRANSISTOR
Q2604	2SC4617/QR/-X	TRANSISTOR
Q3501	2SC4226/4/-X	TRANSISTOR
Q3502	2SD1979/S/-X	TRANSISTOR
Q3503	2SD1979/S/-X	TRANSISTOR
Q3504	2SC4226/4/-X	TRANSISTOR
Q3505	2SA1577/QR/-X	TRANSISTOR
Q3506	DTC144EE	TRANSISTOR
	or PDTC144EE	TRANSISTOR
	or RN1104	TRANSISTOR
	or UN9213J	TRANSISTOR
	or PDTC144EE	TRANSISTOR
	or RN1104	TRANSISTOR
Q3701	HN1C01FU/G/-X	PAIR TRANSISTOR
	or PUMX1	PAIR TRANSISTOR
Q3702	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q3703	2SA1774/QR/-X	TRANSISTOR
	or 2SA1832/YG/-X	TRANSISTOR
Q3704	HN1C01FU/G/-X	PAIR TRANSISTOR
	or PUMX1	PAIR TRANSISTOR
Q3705	HN1A01FU/G/-X	PAIR TRANSISTOR
	or PUMT1	PAIR TRANSISTOR
Q3706	HN1C01FU/G/-X	PAIR TRANSISTOR
	or PUMX1	PAIR TRANSISTOR
Q3707	HN1A01FU/G/-X	PAIR TRANSISTOR
	or PUMT1	PAIR TRANSISTOR
Q3708	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q3709	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q3710	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q3711	2SA1774/QR/-X	TRANSISTOR
	or 2SA1832/YG/-X	TRANSISTOR
Q4302	UMT2N	PAIR TRANSISTOR
Q4306	2SA1774/QR/-X	TRANSISTOR
Q4803	2SC4655/BC/-X	TRANSISTOR
Q4851	2SC4617/QR/-X	TRANSISTOR
Q6111	CPH3304	MOS FET

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	Q6121	CPH3304	MOS FET	
	Q6123	2SB1121/TU/-X	TRANSISTOR	
	Q6124	2SC4617/QR/-X	TRANSISTOR	
		or 2SC4738/YG/-X	TRANSISTOR	
	Q6131	CPH3304	MOS FET	
	Q6132	DTC144EE	TRANSISTOR	
		or RN1104	TRANSISTOR	
	Q6141	CPH3304	MOS FET	
	Q6151	CPH3304	MOS FET	
	Q6161	CPH3304	MOS FET	
	Q6162	HN1C01FU/G/-X	PAIR TRANSISTOR	
	Q6163	2SA1577/QR/-X	TRANSISTOR	
	Q6164	2SC4617/QR/-X	TRANSISTOR,A,B,C	
		or 2SC4738/YG/-X	TRANSISTOR,A,B,C	
	Q6165	HN1A01FU/G/-X	PAIR TRANSISTOR	
	Q6166	2SC4617/QR/-X	TRANSISTOR	
		or 2SC4738/YG/-X	TRANSISTOR	
	Q6167	2SA1774/QR/-X	TRANSISTOR	
		or 2SA1832/YG/-X	TRANSISTOR	
	Q6168	DTC144EE	TRANSISTOR	
		or RN1104	TRANSISTOR	
	Q6201	2SA1774/QR/-X	TRANSISTOR	
		or 2SA1832/YG/-X	TRANSISTOR	
	Q6202	2SD1621(TU)	TRANSISTOR	
	Q6203	2SC4617/QR/-X	TRANSISTOR	
		or 2SC4738/YG/-X	TRANSISTOR	
	Q6301	DTC144EE	TRANSISTOR	
		or RN1104	TRANSISTOR	
	Q6302	2SK1830	MOS FET	
	Q6303	2SJ347	MOS FET	
	Q6304	2SK1830	MOS FET	
	Q6305	CPH3304	MOS FET	
⚠	D1001	RB715F	SB DIODE	
	D1303	SB007W03Q	SB DIODE	
	D1602	DAP222	DIODE	
	D1603	DAP222	DIODE	
	D1604	DAP222	DIODE	
	D5501	1SS355	DIODE	
	D6111	CRS06	SB DIODE	
	D6121	CRS06	SB DIODE	
	D6122	1SS357	SB DIODE	
	D6131	CRS06	SB DIODE	
	D6141	CRS06	SB DIODE	
	D6151	CRS06	SB DIODE	
	D6152	CRS06	SB DIODE	
	D6161	1SS383	SB DIODE	
	D6163	1SS383	SB DIODE	
	D6165	MA8091/L/-X	ZENER DIODE	
	R1001	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1003	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1004	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
⚠	R1005	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1006	NRVA6AD-823W	CMF RESISTOR	82kΩ,1/16W
	R1007	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1008	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1009	NRVA6AD-473W	CMF RESISTOR	47kΩ,1/16W
	R1010	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R1011	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1012	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1013	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1014	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R1015	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1017	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1018	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1021	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1022	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1025	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1026	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1034	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1035	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1037	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1038	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1039	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1042	NRSA6AJ-183W	MG RESISTOR	18kΩ,1/16W
	R1043	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R1045	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
	R1047	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R1048	NRSA6AJ-393W	MG RESISTOR	39kΩ,1/16W
	R1049	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
	R1050	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1051	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1052	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1053	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1054	NRSA6AJ-822W	MG RESISTOR	8.2kΩ,1/16W
	R1055	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1056	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1057	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
	R1058	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
	R1060	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W
	R1062	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1063	NRSA6AJ-681W	MG RESISTOR	680Ω,1/16W
	R1065	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1066	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R1067	NRSA6AJ-393W	MG RESISTOR	39kΩ,1/16W
	R1068	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
	R1071	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1072	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1073	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1074	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1076	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1077	NRVA6AD-473W	CMF RESISTOR	47kΩ,1/16W
	R1078	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1079	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1080	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1081	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1082	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1083	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1084	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1085	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1302	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
	R1307	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
	R1310	NRSA6AJ-0R0W	MG RESISTOR,A,C,D	0Ω,1/16W
	R1311	NRSA6AJ-0R0W	MG RESISTOR,A,C,D	0Ω,1/16W
	R1408	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
	R1410	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
	R1412	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
	R1413	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
	R1414	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1415	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1420	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1427	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
	R1428	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R1429	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R1430	NRSA6AJ-753W	MG RESISTOR	75kΩ,1/16W
R1431	NRSA6AJ-334W	MG RESISTOR	330kΩ,1/16W
R1432	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R1433	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1434	NRSA6AJ-153W	MG RESISTOR	15kΩ,1/16W
R1435	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1438	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1439	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1444	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1445	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1446	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1447	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1450	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R1451	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R1452	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R1453	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R1458	NRSA6AJ-683W	MG RESISTOR	68kΩ,1/16W
R1459	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1460	NRSA6AJ-683W	MG RESISTOR	68kΩ,1/16W
R1461	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1464	NRSA6AJ-820W	MG RESISTOR	82Ω,1/16W
R1465	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R1466	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R1467	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1468	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1469	NRSA6AJ-221W	MG RESISTOR	220Ω,1/16W
R1470	NRSA6AJ-221W	MG RESISTOR	220Ω,1/16W
R1471	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1474	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R1475	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R1476	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
R1477	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R1480	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R1601	NRSA6AJ-681W	MG RESISTOR	680Ω,1/16W
R1602	NRSA6AJ-124W	MG RESISTOR	120kΩ,1/16W
R1603	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R1604	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R1605	NRV142F-R22X	CMF RESISTOR	0.22Ω,1/4W
R1606	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R1609	NRV142F-R33X	CMF RESISTOR	0.33Ω,1/4W
R1610	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
R1611	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
R1612	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R1613	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R1614	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
R1615	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R1616	NRSA6AJ-391W	MG RESISTOR	390Ω,1/16W
R1617	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W
R1618	NRSA6AJ-154W	MG RESISTOR	150kΩ,1/16W
R1619	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R1620	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R1621	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R1622	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R1624	NRVA6AD-123W	CMF RESISTOR	12kΩ,1/16W
R1625	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R1626	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R1627	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R1628	NRVA6AD-361W	CMF RESISTOR	360Ω,1/16W
R1629	NRSA6AJ-684W	MG RESISTOR	680kΩ,1/16W
R1630	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R1631	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R1635	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R1636	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R1637	NRSA6AJ-124W	MG RESISTOR	120kΩ,1/16W
R1644	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2101	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2102	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2103	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2104	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2105	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2106	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W
R2201	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω,1/16W
R2202	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω,1/16W
R2203	NRSA6AJ-183W	MG RESISTOR	18kΩ,1/16W
R2204	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R2205	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2206	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R2207	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R2208	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R2209	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R2213	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R2214	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2401	NRSA6AJ-820W	MG RESISTOR	82Ω,1/16W
R2402	NRSA6AJ-820W	MG RESISTOR	82Ω,1/16W
R2403	NRSA6AJ-820W	MG RESISTOR	82Ω,1/16W
R2404	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R2405	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2406	NRSA6AJ-113W	MG RESISTOR	11kΩ,1/16W
R2601	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R2602	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R2603	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R2604	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R2605	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R2606	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R2607	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R2608	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R2609	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2610	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2611	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2612	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2613	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
R2614	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
R2615	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R2616	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R2621	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R2622	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R2623	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R2624	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R2625	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
R2626	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
R2627	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2628	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2629	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2630	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2631	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R2632	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R2633	NRSA6AJ-681W	MG RESISTOR	680Ω,1/16W
R2634	NRSA6AJ-681W	MG RESISTOR	680Ω,1/16W
R2635	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R2636	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R3002	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R3007	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3008	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W
R3030	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
R3031	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R3032	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3052	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3054	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
R3056	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
R3057	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3058	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R3059	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3060	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R3062	NRSA6AJ-124W	MG RESISTOR	120kΩ,1/16W
R3063	NRSA6AJ-124W	MG RESISTOR	120kΩ,1/16W
R3101	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
R3102	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3103	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R3105	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R3106	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
R3113	NRSA6AJ-394W	MG RESISTOR	390kΩ,1/16W
R3115	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R3117	NRSA6AJ-560W	MG RESISTOR	56Ω,1/16W
R3118	NRSA6AJ-560W	MG RESISTOR	56Ω,1/16W
R3119	NRSA6AJ-560W	MG RESISTOR	56Ω,1/16W
R3120	NRSA6AJ-560W	MG RESISTOR	56Ω,1/16W
R3121	NRSA6AJ-512W	MG RESISTOR	5.1kΩ,1/16W
R3128	NRSA6AJ-512W	MG RESISTOR	5.1kΩ,1/16W
R3201	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3202	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3211	NRSA6AJ-272W	MG RESISTOR	2.7kΩ,1/16W
R3212	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R3215	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3221	NRSA6AJ-680W	MG RESISTOR	68Ω,1/16W
R3224	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3234	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3236	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R3303	NRSA6AJ-391W	MG RESISTOR	390Ω,1/16W
R3304	NRSA6AJ-121W	MG RESISTOR	120Ω,1/16W
R3307	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3308	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3309	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3310	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R3312	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3313	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3314	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R3315	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
R3316	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3317	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R3318	NRSA6AJ-562W	MG RESISTOR	5.6kΩ,1/16W
R3330	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3331	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R3332	NRSA6AJ-823W	MG RESISTOR	82kΩ,1/16W
R3333	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R3334	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3335	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3336	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3337	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R3338	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R3339	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R3341	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R3343	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3344	NRSA6AJ-823W	MG RESISTOR	82kΩ,1/16W
R3345	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R3346	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R3347	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3348	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R3349	NRVA6AD-273W	CMF RESISTOR	27kΩ,1/16W
R3350	NRVA6AD-183W	CMF RESISTOR	18kΩ,1/16W
R3351	NRVA6AD-121W	CMF RESISTOR	120Ω,1/16W
R3357	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3361	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3362	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
R3363	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3364	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R3366	NRSA6AJ-562W	MG RESISTOR	5.6kΩ,1/16W
R3367	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3379	NRSA6AJ-822W	MG RESISTOR	8.2kΩ,1/16W
R3380	NRSA6AJ-822W	MG RESISTOR	8.2kΩ,1/16W
R3502	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3504	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3506	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
R3507	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3508	NRSA6AJ-272W	MG RESISTOR	2.7kΩ,1/16W
R3509	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
R3510	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3511	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3512	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
R3513	NRSA6AJ-680W	MG RESISTOR	68Ω,1/16W
R3514	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3515	NRSA6AJ-181W	MG RESISTOR	180Ω,1/16W
R3516	NRSA6AJ-181W	MG RESISTOR	180Ω,1/16W
R3517	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3518	NRSA6AJ-680W	MG RESISTOR	68Ω,1/16W
R3519	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
R3520	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3521	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W
R3523	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R3524	NRSA6AJ-392W	MG RESISTOR	3.9kΩ,1/16W
R3701	NRVA6AD-561W	CMF RESISTOR	560Ω,1/16W
R3702	NRVA6AD-472W	CMF RESISTOR	4.7kΩ,1/16W
R3703	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3704	NRVA6AD-272W	CMF RESISTOR	2.7kΩ,1/16W
R3705	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
R3706	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3708	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R3709	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R3710	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R3711	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R3712	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R3713	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3714	NRVA6AD-331W	CMF RESISTOR	330Ω,1/16W
R3715	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
R3716	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3717	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R3718	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R3719	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R3720	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R3721	NRSA63J-750X	MG RESISTOR	75Ω,1/16W
R3722	NRSA63J-750X	MG RESISTOR	75Ω,1/16W
R3723	NRSA63J-750X	MG RESISTOR	75Ω,1/16W
R3724	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
R3725	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R3726	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3727	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
R3728	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4201	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4203	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4204	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4205	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4206	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4207	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R4301	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W
R4302	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4304	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R4305	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4309	NRVA6AD-272W	CMF RESISTOR	2.7kΩ,1/16W
R4311	NRVA6AD-272W	CMF RESISTOR	2.7kΩ,1/16W
R4313	NRVA6AD-272W	CMF RESISTOR	2.7kΩ,1/16W
R4315	NRVA6AD-750W	CMF RESISTOR	75Ω,1/16W
R4316	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R4317	NRVA6AD-620W	CMF RESISTOR	62Ω,1/16W
R4318	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R4328	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R4329	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
R4330	NRSA6AJ-220W	MG RESISTOR	22Ω,1/16W
R4333	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4334	NRVA6AD-221W	CMF RESISTOR	220Ω,1/16W
R4335	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4338	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4339	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4341	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4342	NRVA6AD-750W	CMF RESISTOR	75Ω,1/16W
R4343	NRVA6AD-101W	CMF RESISTOR	100Ω,1/16W
R4350	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4351	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4352	NRVA6AD-123W	CMF RESISTOR	12kΩ,1/16W
R4353	NRVA6AD-103W	CMF RESISTOR	10kΩ,1/16W
R4354	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4355	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4357	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4358	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4359	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4360	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4361	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4801	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R4802	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4803	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4804	NRSA6AJ-151W	MG RESISTOR	150Ω,1/16W
R4805	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4806	NRSA6AJ-823W	MG RESISTOR	82kΩ,1/16W
R4807	NRSA6AJ-683W	MG RESISTOR	68kΩ,1/16W
R4808	NRSA6AJ-243W	MG RESISTOR	24kΩ,1/16W
R4809	NRSA6AJ-681W	MG RESISTOR	680Ω,1/16W
R4810	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4811	NRSA6AJ-564W	MG RESISTOR	560kΩ,1/16W
R4812	NRSA6AJ-153W	MG RESISTOR	15kΩ,1/16W
R4814	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R4815	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R4816	NRSA6AJ-185W	MG RESISTOR	1.8MΩ,1/16W
R4817	NRSA6AJ-564W	MG RESISTOR	560kΩ,1/16W
R4818	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4819	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4820	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R4821	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R4822	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R4823	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4824	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R4825	NRSA6AJ-183W	MG RESISTOR	18kΩ,1/16W
R4826	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R4827	NRSA6AJ-122W	MG RESISTOR	1.2kΩ,1/16W
R4851	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4853	NRSA6AJ-271W	MG RESISTOR	270Ω,1/16W
R4854	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4856	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
R4857	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
R4858	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R4859	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4860	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4862	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
R4863	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
R4864	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4865	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4866	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4867	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4868	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4869	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4871	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5501	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5503	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5504	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5505	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5506	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5507	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5509	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W
R5510	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W
R5511	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W
R5512	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R5513	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R5514	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R6001	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W
R6002	NRSA6AJ-184W	MG RESISTOR	180kΩ,1/16W
R6009	NRVA6AD-113W	CMF RESISTOR	11kΩ,1/16W
R6010	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R6011	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R6012	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R6111	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6112	NRVA6AD-223W	CMF RESISTOR	22kΩ,1/16W
R6113	NRVA6AD-113W	CMF RESISTOR	11kΩ,1/16W
R6121	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6122	NRVA6AD-183W	CMF RESISTOR	18kΩ,1/16W
R6123	NRVA6AD-472W	CMF RESISTOR	4.7kΩ,1/16W
R6125	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R6126	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R6127	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R6131	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R6132	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6133	NRSA6AJ-243W	MG RESISTOR	24kΩ,1/16W
R6134	NRVA6AD-302W	CMF RESISTOR	3kΩ,1/16W
R6135	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
R6136	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6137	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R6138	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R6141	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6142	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R6143	NRSA6AJ-562W	MG RESISTOR	5.6kΩ,1/16W
R6144	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R6145	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R6146	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R6151	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6152	NRVA6AD-123W	CMF RESISTOR	12kΩ,1/16W
R6153	NRVA6AD-113W	CMF RESISTOR	11kΩ,1/16W
R6161	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6162	NRVA6AD-683W	CMF RESISTOR	68kΩ,1/16W
R6163	NRVA6AD-472W	CMF RESISTOR	4.7kΩ,1/16W
R6165	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R6166	NRSA6AJ-273W	MG RESISTOR	27kΩ,1/16W
R6167	NRSA6AJ-822W	MG RESISTOR	8.2kΩ,1/16W
R6168	NRVA6AD-513W	CMF RESISTOR	51kΩ,1/16W
R6169	NRVA6AD-823W	CMF RESISTOR	82kΩ,1/16W
R6170	NRVA6AD-473W	CMF RESISTOR	47kΩ,1/16W
R6171	NRSA6AJ-222W	MG RESISTOR,A,B,C	2.2kΩ,1/16W
R6172	NRVA6AD-623W	CMF RESISTOR	62kΩ,1/16W
R6174	NRVA6AD-823W	CMF RESISTOR	82kΩ,1/16W
R6175	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R6176	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R6177	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R6178	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R6179	NRSA6AJ-272W	MG RESISTOR	2.7kΩ,1/16W
R6180	NRSA6AJ-823W	MG RESISTOR	82kΩ,1/16W
R6181	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6182	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R6201	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R6202	NRSA6AJ-181W	MG RESISTOR	180Ω,1/16W
R6203	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R6205	NRSA6AJ-184W	MG RESISTOR	180kΩ,1/16W
R6206	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R6301	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6302	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6303	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W
R6304	NRSA6AJ-183W	MG RESISTOR	18kΩ,1/16W
R6305	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6306	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6307	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R6914	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
RA1001	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA1002	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA1003	NRZ0034-104W	NETWORK RESISTOR	100kΩ
RA1004	NRZ0034-104W	NETWORK RESISTOR	100kΩ
RA1005	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA1006	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA1401	NRZ0034-473W	NETWORK RESISTOR	47kΩ
RA1402	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA1403	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA4301	NRZ0034-101W	NETWORK RESISTOR	100Ω
RA4302	NRZ0034-101W	NETWORK RESISTOR	100Ω
RA4303	NRZ0034-101W	NETWORK RESISTOR	100Ω
RA4304	NRZ0034-100W	NETWORK RESISTOR	10Ω
RA4305	NRZ0034-100W	NETWORK RESISTOR	10Ω
RA4306	NRZ0034-100W	NETWORK RESISTOR	10Ω
C1003	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C1004	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C1008	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C1009	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C1010	NBE20JM-226X	T CAPACITOR	22µF,6.3V
C1011	NBP41CM-226X	T CAPACITOR	22µF,16V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C1012	NCFA1HZ-103W	CAPACITOR	0.01µF,50V
C1013	NDCA1HJ-120W	CAPACITOR	12pF,50V
C1015	NCFA1HZ-103W	CAPACITOR	0.01µF,50V
C1016	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C1019	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C1021	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C1022	NCFA1HZ-103W	CAPACITOR	0.01µF,50V
C1023	NCFA1HZ-103W	CAPACITOR	0.01µF,50V
C1024	NCFA1HZ-103W	CAPACITOR	0.01µF,50V
C1026	NCFA1HZ-103W	CAPACITOR	0.01µF,50V
C1027	NCFA1HZ-103W	CAPACITOR	0.01µF,50V
C1028	NCFA1HZ-103W	CAPACITOR	0.01µF,50V
C1031	NCFA1HZ-103W	CAPACITOR	0.01µF,50V
C1032	NBE40JM-226X	T CAPACITOR	22µF,6.3V
C1034	NBE40JM-226X	T CAPACITOR	22µF,6.3V
C1037	NCFA1HZ-103W	CAPACITOR	0.01µF,50V
C1041	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C1042	NCFA1HZ-103W	CAPACITOR	0.01µF,50V
C1043	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C1301	NCBA1AK-104W	CAPACITOR,B,E,F	0.1µF,10V
C1302	NCBA1AK-104W	CAPACITOR,B,E,F	0.1µF,10V
C1303	NCBA1AK-104W	CAPACITOR,B,E,F	0.1µF,10V
C1304	NCBA1AK-104W	CAPACITOR,B,E,F	0.1µF,10V
C1305	NCBA1AK-104W	CAPACITOR,B,E,F	0.1µF,10V
C1306	NCBA1AK-104W	CAPACITOR,B,E,F	0.1µF,10V
C1307	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C1401	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C1402	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C1414	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C1415	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C1416	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C1417	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C1418	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C1419	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C1420	NCBA1CK-223W	CAPACITOR	0.022µF,16V
C1421	NCBA1CK-223W	CAPACITOR	0.022µF,16V
C1422	NCBA1CK-223W	CAPACITOR	0.022µF,16V
C1423	NCBA1CK-223W	CAPACITOR	0.022µF,16V
C1424	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C1425	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C1601	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C1602	NBE21AM-106X	T CAPACITOR	10µF,10V
C1603	NBE21AM-106X	T CAPACITOR	10µF,10V
C1605	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C1606	NCBA1HK-152W	CAPACITOR	0.0015µF,50V
C1607	NCBA1AK-473W	CAPACITOR	0.047µF,10V
C1614	NBE21AM-106X	T CAPACITOR	10µF,10V
C1618	NCBA1HK-222W	CAPACITOR	0.0022µF,50V
C1619	NCBA1HK-222W	CAPACITOR	0.0022µF,50V
C1620	NCBA1HK-222W	CAPACITOR	0.0022µF,50V
C1621	NCB21AK-105X	CAPACITOR	1µF,10V
C1622	NCBA1CK-223W	CAPACITOR	0.022µF,16V
C1623	NCBA1AK-473W	CAPACITOR	0.047µF,10V
C1624	NCB31EK-103X	CAPACITOR	0.01µF,25V
C1625	NCBA1AK-473W	CAPACITOR	0.047µF,10V
C1626	NCBA1HK-331W	CAPACITOR	330pF,50V
C1627	NCBA1CK-822W	CAPACITOR	0.0082µF,16V
C1628	NCB21CK-224X	CAPACITOR	0.22µF,16V
C1632	NBE21AM-106X	T CAPACITOR	10µF,10V
C1633	NCF21CZ-684X	CAPACITOR	0.68µF,16V
C1635	NCBA1AK-104W	CAPACITOR	0.1µF,10V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C1641	NCB31AK-474X	CAPACITOR	0.47μF,10V
C2101	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2103	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2201	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2202	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2203	NBP21CM-105X	T CAPACITOR	1μF,16V
C2205	NBP21CM-105X	T CAPACITOR	1μF,16V
C2207	NCB30JK-105X	CAPACITOR	1μF,6.3V
C2208	NCB30JK-105X	CAPACITOR	1μF,6.3V
C2209	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2210	NCBA1CK-153W	CAPACITOR	0.015μF,16V
C2211	NCBA1AK-333W	CAPACITOR	0.033μF,10V
C2212	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2213	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2214	NBP21CM-105X	T CAPACITOR	1μF,16V
C2216	NCB30JK-105X	CAPACITOR	1μF,6.3V
C2217	NCB30JK-105X	CAPACITOR	1μF,6.3V
C2401	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2402	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2601	NCBA1HK-102W	CAPACITOR	0.001μF,50V
C2602	NCBA1HK-102W	CAPACITOR	0.001μF,50V
C2603	NCBA1EK-682W	CAPACITOR	0.0068μF,25V
C2604	NCBA1EK-682W	CAPACITOR	0.0068μF,25V
C2605	NCBA1AK-333W	CAPACITOR	0.033μF,10V
C2606	NCBA1AK-333W	CAPACITOR	0.033μF,10V
C2607	NBP21CM-105X	T CAPACITOR	1μF,16V
C2608	NBP21CM-105X	T CAPACITOR	1μF,16V
C2609	NBP21VM-104X	T CAPACITOR	0.1μF,35V
C2610	NBP21VM-104X	T CAPACITOR	0.1μF,35V
C2617	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2618	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2619	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C2620	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C2622	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2623	NBP21CM-105X	T CAPACITOR	1μF,16V
C2624	NCBA1EK-562W	CAPACITOR	0.0056μF,25V
C2625	NCBA1EK-562W	CAPACITOR	0.0056μF,25V
C2626	NCBA1EK-562W	CAPACITOR	0.0056μF,25V
C2627	NCBA1EK-562W	CAPACITOR	0.0056μF,25V
C2628	NCB31CK-473X	CAPACITOR	0.047μF,16V
C2629	NCB31CK-473X	CAPACITOR	0.047μF,16V
C2630	NCBA1CK-123W	CAPACITOR	0.012μF,16V
C2631	NCBA1CK-123W	CAPACITOR	0.012μF,16V
C2632	NCBA1HK-332W	CAPACITOR	0.0033μF,50V
C2633	NCBA1HK-332W	CAPACITOR	0.0033μF,50V
C2634	NCBA1HK-332W	CAPACITOR	0.0033μF,50V
C2635	NCBA1HK-332W	CAPACITOR	0.0033μF,50V
C2636	NCBA1EK-682W	CAPACITOR	0.0068μF,25V
C2637	NCBA1EK-682W	CAPACITOR	0.0068μF,25V
C3003	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3004	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3006	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3009	NDCA1HJ-100W	CAPACITOR	10pF,50V
C3010	NDCA1HJ-100W	CAPACITOR	10pF,50V
C3011	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3012	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3022	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3023	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3027	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3028	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3035	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3037	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3038	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3040	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3041	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3042	NCB30JK-474X	CAPACITOR	0.47μF,6.3V
C3047	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3048	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3049	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3050	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3101	NDCA1EJ-271W	CAPACITOR	270pF,25V
C3102	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3103	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3104	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3105	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3106	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3107	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3108	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3109	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3203	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3204	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3205	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3207	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3208	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3212	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3213	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3214	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3215	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3217	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3218	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3219	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3220	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3221	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3222	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3223	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3224	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3231	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3232	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3301	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3302	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3303	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3304	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3305	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3306	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3307	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3308	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3309	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3310	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3311	NDCA1HJ-151W	CAPACITOR	150pF,50V
C3313	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3314	NCBA1HK-102W	CAPACITOR	0.001μF,50V
C3316	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3317	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3318	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3319	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3320	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3321	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3322	NCBA1AK-683W	CAPACITOR	0.068μF,10V
C3323	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3324	NCBA1AK-333W	CAPACITOR	0.033μF,10V
C3326	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3327	NCB30JK-105X	CAPACITOR	1μF,6.3V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C3328	NCB30JK-105X	CAPACITOR	1µF,6.3V
C3331	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C3332	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C3333	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C3334	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3335	NDCA1HJ-100W	CAPACITOR	10pF,50V
C3336	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C3337	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3501	NCBA1HK-122W	CAPACITOR	0.0012µF,50V
C3502	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C3503	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C3504	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3505	NDCA1HJ-470W	CAPACITOR	47pF,50V
C3506	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3507	NCBA1HK-681W	CAPACITOR	680pF,50V
C3508	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3509	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3510	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3511	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3512	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3513	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3514	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3515	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3516	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3517	NCBA1HK-152W	CAPACITOR	0.0015µF,50V
C3518	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3519	NDCA1HJ-330W	CAPACITOR	33pF,50V
C3520	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3521	NDCA1HJ-220W	CAPACITOR	22pF,50V
C3522	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3523	NCB21AK-105X	CAPACITOR	1µF,10V
C3524	NCB21AK-105X	CAPACITOR	1µF,10V
C3525	NDCA1HJ-220W	CAPACITOR	22pF,50V
C3526	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3527	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3528	NDCA1HJ-330W	CAPACITOR	33pF,50V
C3529	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3530	NCBA1HK-152W	CAPACITOR	0.0015µF,50V
C3531	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3532	NBE40JM-226X	T CAPACITOR	22µF,6.3V
C3533	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3534	NBE40JM-226X	T CAPACITOR	22µF,6.3V
C3535	NBE40JM-226X	T CAPACITOR	22µF,6.3V
C3701	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3702	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C3703	NDCA1HJ-820W	CAPACITOR	82pF,50V
C3704	NDCA1HJ-150W	CAPACITOR	15pF,50V
C3705	NCB30JK-105X	CAPACITOR	1µF,6.3V
C3706	NCB30JK-105X	CAPACITOR	1µF,6.3V
C3707	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3708	NDCA1HJ-101W	CAPACITOR	100pF,50V
C3709	NDCA1HJ-150W	CAPACITOR	15pF,50V
C3710	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3711	NBE20JM-226X	T CAPACITOR	22µF,6.3V
C3712	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C3713	NBE20GM-106X	T CAPACITOR	10µF,4.0V
C3714	NBE40GM-107X	T CAPACITOR	100µF,4.0V
C4201	NBE40GM-107X	T CAPACITOR	100µF,4.0V
C4202	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4203	NCB30JK-105X	CAPACITOR	1µF,6.3V
C4204	NCBA1AK-104W	CAPACITOR	0.1µF,10V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C4205	NCB21CK-105X	CAPACITOR	1µF,16V
C4206	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4207	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4209	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4210	NCB21CK-105X	CAPACITOR	1µF,16V
C4211	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4212	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4213	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4214	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4215	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4216	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4217	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4301	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4302	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4303	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4304	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4305	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4306	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4307	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4308	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4309	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4310	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4311	NBE40JM-226X	T CAPACITOR	22µF,6.3V
C4312	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4314	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4315	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4316	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4317	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4318	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4319	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4320	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4321	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4322	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4323	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4324	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4325	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4326	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4327	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4328	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4329	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4330	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4331	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4332	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4333	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4335	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4337	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4338	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4339	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4340	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4342	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4343	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4344	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4345	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4346	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4347	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4351	NCB30JK-105X	CAPACITOR	1µF,6.3V
C4352	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4353	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4801	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4802	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4803	NBE20JM-106X	T CAPACITOR	10µF,6.3V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C4804	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4805	NDCA1HJ-101W	CAPACITOR	100pF,50V
C4806	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4808	NCB30JK-105X	CAPACITOR	1µF,6.3V
C4809	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4810	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C4811	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C4812	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4813	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4814	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4815	NDC31HJ-331X	CAPACITOR	330pF,50V
C4818	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4819	NCB30JK-105X	CAPACITOR	1µF,6.3V
C4821	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4851	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4852	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4853	NBE21AM-106X	T CAPACITOR	10µF,10V
C4854	NBE21AM-106X	T CAPACITOR	10µF,10V
C4855	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4858	NDCA1HJ-680W	CAPACITOR	68pF,50V
C4859	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C4860	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C4861	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C4862	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C4864	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4865	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C5501	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5503	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5504	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5505	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5506	NBE40GM-476X	T CAPACITOR	47µF,4.0V
C5507	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5508	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5509	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5510	NBP21VM-105X	T CAPACITOR	1µF,35V
C5511	NBP21DM-475X	T CAPACITOR	4.7µF,20V
C5512	NBE21AM-106X	T CAPACITOR	10µF,10V
C5513	NCB31CK-104X	CAPACITOR	0.1µF,16V
C5514	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5515	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5516	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5517	NCB31CK-104X	CAPACITOR	0.1µF,16V
C5518	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C5519	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C6001	NCB21CK-105X	CAPACITOR	1µF,16V
C6002	NCB21CK-105X	CAPACITOR	1µF,16V
C6003	NEA71CM-106X	E CAPACITOR	10µF,16V
C6004	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6005	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6006	NCB31CK-473X	CAPACITOR	0.047µF,16V
C6007	NCF21CZ-105X	CAPACITOR	1µF,16V
C6008	NCB21CK-105X	CAPACITOR	1µF,16V
C6009	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C6010	NCF21CZ-105X	CAPACITOR	1µF,16V
C6011	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6012	NCBA1HK-272W	CAPACITOR	0.0027µF,50V
C6013	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6014	NCBA1HK-561W	CAPACITOR	560pF,50V
C6015	NCBA1HK-561W	CAPACITOR	560pF,50V
C6016	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C6017	NDCA1HJ-101W	CAPACITOR	100pF,50V
C6018	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C6019	NCF21CZ-105X	CAPACITOR	1µF,16V
C6111	NCB21CK-105X	CAPACITOR	1µF,16V
C6113	NCB10JK-106X	CAPACITOR	10µF,6.3V
C6114	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C6121	NCB21CK-105X	CAPACITOR	1µF,16V
C6123	NCB10JK-106X	CAPACITOR	10µF,6.3V
C6124	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C6125	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C6126	NCB21CK-105X	CAPACITOR	1µF,16V
C6127	NCB21CK-105X	CAPACITOR	1µF,16V
C6131	NCB21CK-105X	CAPACITOR	1µF,16V
C6132	NCB21CK-105X	CAPACITOR	1µF,16V
C6133	NCB31CK-683X	CAPACITOR	0.068µF,16V
C6141	NCB21CK-105X	CAPACITOR	1µF,16V
C6142	NCB21CK-105X	CAPACITOR	1µF,16V
C6143	NCB21CK-224X	CAPACITOR	0.22µF,16V
C6151	NCB21CK-105X	CAPACITOR	1µF,16V
C6153	NCB10JK-106X	CAPACITOR	10µF,6.3V
C6154	NCBA1EK-472W	CAPACITOR	0.0047µF,25V
C6155	NCB30JK-105X	CAPACITOR	1µF,6.3V
C6161	NCB21CK-105X	CAPACITOR	1µF,16V
C6162	NCB11EK-105X	CAPACITOR	1µF,25V
C6163	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C6164	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C6165	NCB21CK-105X	CAPACITOR,A,B,C	1µF,16V
C6167	NCB21CK-105X	CAPACITOR	1µF,16V
C6168	NCB11EK-105X	CAPACITOR	1µF,25V
C6169	NCB21CK-105X	CAPACITOR	1µF,16V
C6171	NCB21CK-105X	CAPACITOR	1µF,16V
C6173	NCB21CK-105X	CAPACITOR	1µF,16V
C6174	NCB21CK-105X	CAPACITOR	1µF,16V
C6175	NCB21CK-105X	CAPACITOR	1µF,16V
C6201	NEA71CM-106X	E CAPACITOR	10µF,16V
C6301	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C6401	NCB21CK-105X	CAPACITOR	1µF,16V
C6402	NCB21CK-105X	CAPACITOR	1µF,16V
L1001	NQL315K-100X	COIL	10µH
L1002	NQL315K-100X	COIL	10µH
L1003	NQL315K-100X	COIL	10µH
L1401	NQL034K-100X	COIL	10µH
L1602	NQL315M-1R0X	COIL	1µH
L2101	NQL315K-100X	COIL	10µH
L2601	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L2602	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L2603	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L3001	NQR0129-002X	FERRITE BEAD	
L3002	NQR0129-002X	FERRITE BEAD	
L3004	NQR0129-002X	FERRITE BEAD	
L3005	NQR0129-002X	FERRITE BEAD	
L3101	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L3102	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L3103	NQR0384-003X	COIL	
L3104	NQR0384-003X	COIL	
L3202	NQR0129-002X	FERRITE BEAD	
L3203	NQR0129-002X	FERRITE BEAD	
L3204	NQR0129-002X	FERRITE BEAD	
L3301	NQR0129-002X	FERRITE BEAD	
L3302	NQR0129-002X	FERRITE BEAD	
L3303	NQR0129-002X	FERRITE BEAD	
L3304	NQR0129-002X	FERRITE BEAD	

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
L3501	NQL402M-100X	COIL	10μH
L3502	NQL402M-100X	COIL	10μH
L3503	NQL085J-220X	COIL	22μH
L3504	NQL085J-220X	COIL	22μH
L3505	NQL402M-100X	COIL	10μH
L3506	NQL402M-100X	COIL	10μH
L3507	NQL315K-100X	COIL	10μH
L3701	NQL315K-101X	COIL	100μH
L3702	NQL315K-220X	COIL	10μH
L4201	NQR0129-002X	FERRITE BEAD	
L4301	NQR0129-002X	FERRITE BEAD	
L4302	NQR0129-002X	FERRITE BEAD	
L4303	NQL315K-100X	COIL	10μH
L4304	NQL315K-220X	COIL	22μH
L4305	NQR0129-002X	FERRITE BEAD	
L4306	NQR0129-002X	FERRITE BEAD	
L4307	NQL315K-100X	COIL	10μH
L4801	NQL315K-100X	COIL	10μH
L4802	NQL315K-100X	COIL	10μH
L4851	NQR0129-002X	FERRITE BEAD	
L4852	NQL315K-100X	COIL	10μH
L4853	NQL315K-100X	COIL	10μH
L5501	NQL315K-100X	COIL	10μH
L5502	NQR0129-002X	FERRITE BEAD	
L5503	NQR0129-002X	FERRITE BEAD	
L5504	NQR0129-002X	FERRITE BEAD	
L5505	NQL315K-100X	COIL	10μH
L5506	NQL315K-100X	COIL	10μH
L6001	NQLZ011-4R7X	COIL	4.7μH
L6002	NQLZ011-4R7X	COIL	4.7μH
L6111	NQLZ011-390X	COIL	39μH
L6114	NQL144K-220X	COIL	22μH
L6121	NQLZ011-390X	COIL	39μH
L6123	NQL144K-101X	COIL	100μH
L6124	NQL144K-101X	COIL	100μH
L6131	NQLZ011-470X	COIL	47μH
L6141	NQLZ011-470X	COIL	47μH
L6151	NQLZ011-470X	COIL	47μH
L6161	NQLZ011-221X	COIL	220μH
L6401	NQL144K-220X	COIL	22μH
X1001	NAX0294-001X	RESONATOR	
X1002	NAX0325-001X	CRYSTAL RESONATOR	
X3001	NAX0206-001X	CRYSTAL RESONATOR	
X3301	NAX0296-001X	C OSCILLATOR	
X5501	NAX0356-001X	CXO	
WR1	WJJ0148-001A	E-ST C WIRE C-C	
WR2	WJT0027-001A	FFC WIRE	
CN101	QGF0503C1-32V	FFC/FPC CONNECTOR	
CN102	QGF0505F2-22X	FPC CONNECTOR	
CN103	QGA1201F2-11X	CONNECTOR	
CN104	QGA1201F2-02X	CONNECTOR	
CN105	QGB0801K3-20X	CONNECTOR	
CN106	QGA1201F2-03X	CONNECTOR	
CN107	QGF0503C1-18X	FFC/FPC CONNECTOR	
CN108	QGF0512C1-24X	FPC CONNECTOR	
CN110	QGF0505F1-08X	FPC CONNECTOR	
CN111	QGF0503C1-06V	FFC/FPC CONNECTOR	
CN112	QGF0505F2-18X	FPC CONNECTOR	
CN113	QGF0508F1-33X	FPC CONNECTOR	
CN114	QGF0507F1-15X	FPC CONNECTOR	
⚠ F6001	NMFZ009-2R0X-J1	FUSE	2.0A

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
⚠ F6003	NMFZ009-R50X-J1	FUSE	0.5A
⚠ F6005	NMFZ009-R50X-J1	FUSE	0.5A
OT1	LY30029-043A	SPACER(A)	
OT2	LY30029-055A	SPACER(A)	
SD1	LY31656-001A	SHIELD CASE(1)	

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MONITOR BOARD ASSEMBLY <02>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
PW1	YB10280A1-01	MONITOR BOARD ASSY,E	
	YB10280B1-01	MONITOR BOARD ASSY,D,F	
	YB10280D1-01	MONITOR BOARD ASSY,C	
	YB10280E1-01	MONITOR BOARD ASSY,A,B	
IC7101	PCVVQ110BFB	IC,A,B,D,F	
IC7601	AN2533FH	IC	
IC7603	AT25040N-10SC-X	IC	
IC7604	BU4053BCFV	IC,C,E	
IC7605	TC4W53FU	IC,C,E	
IC7606	TC7S04FU	IC,C,E	
IC7607	TC7S08FU	IC(DIGITAL),C,E	
Q7602	DTC144EE	TRANSISTOR,C,E	
Q7603	DTA144EE	TRANSISTOR,C,E	
Q7604	DTA114YE	TRANSISTOR,C,E	
Q7605	DTA114YE	TRANSISTOR,C,E	
Q7606	DTA114YE	TRANSISTOR,C,E	
Q7607	2SC4617/QR/-X	TRANSISTOR	
Q7608	2SA1774/QR/-X	TRANSISTOR	
Q7609	2SC4617/QR/-X	TRANSISTOR	
Q7610	2SA1774/QR/-X	TRANSISTOR	
Q7615	DTA144EE	TRANSISTOR	
Q7616	DTC144EE	TRANSISTOR,C,E	
Q7617	DTA114EE	TRANSISTOR,C,E	
Q7618	DTC144EE	TRANSISTOR,C,E	
Q7619	UMZ1N	PAIR TRANSISTOR,C,E	
D7101	MA111	DIODE,A,B,D,F	
D7601	RB471E	SB DIODE	
D7603	MA111	DIODE,C,E	
R2	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R4	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
R5	NRSA63J-182X	MG RESISTOR	1.8kΩ,1/16W
R6	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
R7103	NRSA02J-0R0X	MG RESISTOR,A,B,D,F	0Ω,1/10W
R7104	NRSA63J-0R0X	MG RESISTOR,A,B,D,F	0Ω,1/16W
R7107	NRSA63J-271X	MG RESISTOR,A,B,D,F	270Ω,1/16W
R7108	NRSA63J-182X	MG RESISTOR,A,B,D,F	1.8kΩ,1/16W
R7114	NRSA63J-223X	MG RESISTOR,A,B,D,F	22kΩ,1/16W
R7115	NRSA63J-153X	MG RESISTOR,A,B,D,F	15kΩ,1/16W
R7118	NRSA63J-153X	MG RESISTOR,A,B,D,F	15kΩ,1/16W
R7121	NRSA63J-473X	MG RESISTOR,A,B,D,F	47kΩ,1/16W
R7604	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
R7610	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
R7611	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W
R7612	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R7613	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R7616	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R7631	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R7632	NRSA63J-101X	MG RESISTOR,A,B,D,F	100Ω,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R7633	NRSA63J-101X	MG RESISTOR,A,B,D,F	100Ω,1/16W
R7634	NRSA63J-101X	MG RESISTOR,A,B,D,F	100Ω,1/16W
R7635	NRSA63J-220X	MG RESISTOR,C,E	22Ω,1/16W
R7636	NRSA63J-220X	MG RESISTOR,C,E	22Ω,1/16W
R7637	NRVA63D-123X	CMF RESISTOR,C,E	12kΩ,1/16W
R7638	NRVA63D-123X	CMF RESISTOR,C,E	12kΩ,1/16W
R7639	NRVA63D-123X	CMF RESISTOR,C,E	12kΩ,1/16W
R7640	NRVA63D-123X	CMF RESISTOR,C,E	12kΩ,1/16W
R7641	NRVA63D-123X	CMF RESISTOR,C,E	12kΩ,1/16W
R7642	NRVA63D-123X	CMF RESISTOR,C,E	12kΩ,1/16W
R7643	NRSA63J-220X	MG RESISTOR,C,E	22Ω,1/16W
R7645	NRSA63J-473X	MG RESISTOR,C,E	47kΩ,1/16W
R7646	NRSA63J-103X	MG RESISTOR,C,E	10kΩ,1/16W
R7649	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7650	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7651	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7652	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7653	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7654	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7657	NRSA63J-154X	MG RESISTOR	150kΩ,1/16W
R7659	NRSA63J-335X	MG RESISTOR	3.3MΩ,1/16W
R7660	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7661	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
R7663	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R7664	NRSA63J-223X	MG RESISTOR,A,B,C	22kΩ,1/16W
	NRSA63J-682X	MG RESISTOR,D,E,F	6.8kΩ,1/16W
R7665	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7666	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7667	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
R7668	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
R7670	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
R7672	NRSA63J-0R0X	MG RESISTOR,A,B,D,F	0Ω,1/16W
R7673	NRSA63J-223X	MG RESISTOR,C,E	22kΩ,1/16W
R7674	NRSA63J-333X	MG RESISTOR,D,E,F	33kΩ,1/16W
R7675	NRSA63J-103X	MG RESISTOR,A,B,C	10kΩ,1/16W
R7677	NRSA63J-223X	MG RESISTOR,D,E,F	22kΩ,1/16W
R7678	NRSA63J-223X	MG RESISTOR,D,E,F	22kΩ,1/16W
R7679	NRSA63J-822X	MG RESISTOR,C,E	8.2kΩ,1/16W
R7681	NRSA63J-0R0X	MG RESISTOR,A,B,D,F	0Ω,1/16W
	NRSA63J-331X	MG RESISTOR,C,E	330Ω,1/16W
R7685	NRSA63J-392X	MG RESISTOR,C,E	3.9kΩ,1/16W
R7687	NRSA63J-183X	MG RESISTOR,C,E	18kΩ,1/16W
R7688	NRSA63J-334X	MG RESISTOR,C,E	330kΩ,1/16W
R7689	NRSA63J-224X	MG RESISTOR,C,E	220kΩ,1/16W
R7690	NRSA63J-393X	MG RESISTOR,C,E	39kΩ,1/16W
VR7101	NVP0016-223X	TRIM RESISTOR,GAIN,A,B,D,F	
VR7102	NVP0016-223X	TRIM RESISTOR,BLACK LEVEL,A,B,D,F	
C1	NCB31EK-103X	CAPACITOR	0.01μF,25V
C7102	NDC31HJ-181X	CAPACITOR,A,B,D,F	180pF,50V
C7103	NCF31CZ-104X	CAPACITOR,A,B,D,F	0.1μF,16V
C7104	NCF31CZ-104X	CAPACITOR,A,B,D,F	0.1μF,16V
C7105	NBE20JM-475X	T CAPACITOR	4.7μF,6.3V
C7106	NCB21HK-122X	CAPACITOR,A,B,D,F	0.0012μF,50V
C7107	NCB31EK-103X	CAPACITOR,A,B,D,F	0.01μF,25V
C7108	NCF21CZ-105X	CAPACITOR,A,B,D,F	1μF,16V
C7109	NCF31CZ-104X	CAPACITOR,A,B,D,F	0.1μF,16V
C7110	NCF31CZ-104X	CAPACITOR,A,B,D,F	0.1μF,16V
C7111	NCF31CZ-104X	CAPACITOR,A,B,D,F	0.1μF,16V
C7112	NCF31CZ-104X	CAPACITOR,A,B,D,F	0.1μF,16V
C7113	NCB31HK-102X	CAPACITOR,A,B,D,F	0.001μF,50V
C7114	NCB31EK-103X	CAPACITOR,A,B,D,F	0.01μF,25V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C7115	NCB31CK-104X	CAPACITOR,A,B,D,F	0.1μF,16V
C7116	NCB31EK-103X	CAPACITOR,A,B,D,F	0.01μF,25V
C7117	NCB31EK-103X	CAPACITOR,A,B,D,F	0.01μF,25V
C7118	NBP41CM-106X	T CAPACITOR	10μF,16V
C7119	NCF31CZ-104X	CAPACITOR,A,B,D,F	0.1μF,16V
C7120	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C7121	NCF31CZ-104X	CAPACITOR,A,B,D,F	0.1μF,16V
C7122	NCF31CZ-104X	CAPACITOR,A,B,D,F	0.1μF,16V
C7123	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C7601	NCB31CK-104X	CAPACITOR	0.1μF,16V
C7602	NBE40JM-476X	T CAPACITOR	47μF,6.3V
C7603	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C7604	NCB31CK-104X	CAPACITOR	0.1μF,16V
C7605	NCB31CK-104X	CAPACITOR	0.1μF,16V
C7606	NCB11CK-225X	CAPACITOR	2.2μF,16V
C7607	NCF31CZ-104X	CAPACITOR	0.1μF,16V
C7608	NCB11CK-225X	CAPACITOR	2.2μF,16V
C7609	NCB11CK-225X	CAPACITOR	2.2μF,16V
C7610	NBP41CM-226X	T CAPACITOR	22μF,16V
C7614	NCF31CZ-104X	CAPACITOR	0.1μF,16V
C7615	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C7618	NCB31HK-822X	CAPACITOR	0.0082μF,50V
C7619	NBE20JM-225X	T CAPACITOR	2.2μF,6.3V
C7620	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C7621	NDC31HJ-151X	CAPACITOR	150pF,50V
C7623	NDC31HJ-471X	CAPACITOR	470pF,50V
C7625	NCB21AK-105X	CAPACITOR	1μF,10V
C7627	NCB31CK-104X	CAPACITOR	0.1μF,16V
C7628	NCB11CK-225X	CAPACITOR	2.2μF,16V
C7629	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C7630	NCB31CK-104X	CAPACITOR	0.1μF,16V
C7631	NCF31AZ-105X	CAPACITOR	1μF,10V
C7632	NCF31AZ-105X	CAPACITOR	1μF,10V
C7636	NCB31HK-102X	CAPACITOR	0.001μF,50V
C7637	NCB31HK-102X	CAPACITOR	0.001μF,50V
C7638	NCF31CZ-104X	CAPACITOR	0.1μF,16V
C7639	NCF31CZ-104X	CAPACITOR,C,E	0.1μF,16V
C7640	NBE21AM-106X	T CAPACITOR	10μF,10V
C7641	NBE21AM-106X	T CAPACITOR	10μF,10V
C7642	NBE21AM-106X	T CAPACITOR	10μF,10V
C7646	NBE21AM-335X	T CAPACITOR	3.3μF,10V
C7647	NBP21DM-335X	T CAPACITOR	3.3μF,20V
C7648	NCF31CZ-104X	CAPACITOR,C,E	0.1μF,16V
C7649	NCF31CZ-104X	CAPACITOR,C,E	0.1μF,16V
C7650	NBP41EM-475X	T CAPACITOR	4.7μF,25V
C7654	NBP41EM-475X	T CAPACITOR	4.7μF,25V
C7655	NCB31CK-104X	CAPACITOR,D,E,F	0.1μF,16V
C7656	NCF31AZ-105X	CAPACITOR	1μF,10V
C7660	NCB31EK-103X	CAPACITOR,C,E	0.01μF,25V
C7661	NCB31EK-103X	CAPACITOR,C,E	0.01μF,25V
C7665	NCB21CK-105X	CAPACITOR,C,E	1μF,16V
C7666	NBE21AM-106X	T CAPACITOR,C,E	10μF,10V
C7667	NDC31HJ-180X	CAPACITOR	18pF,50V
L7101	NQL315K-100X	COIL,A,B,D,F	10μH
L7102	NQL315K-100X	COIL,A,B,D,F	10μH
L7103	NQL315K-100X	COIL,A,B,D,F	10μH
L7603	NQL314K-220X	COIL	22μH
L7604	NQL315K-100X	COIL	10μH
L7605	NQL315K-100X	COIL	10μH
L7608	NQL315K-100X	COIL,D,E,F	10μH
L7610	NQL315K-100X	COIL	10μH

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	L7611	NQL315K-100X	COIL,A,B,C	10µH
	SW1	NSW0092-001X	SLIDE SWITCH	
	SW2	NSW0008-001X	TACT SWITCH	
	SW3	NSW0008-001X	TACT SWITCH	
	SW4	NSW0008-001X	TACT SWITCH	
	SW5	NSW0008-001X	TACT SWITCH	
	SW7601	NSW0105-001X	DETECT SWITCH	
	CN7601	QGF0506F2-32X	FPC CONNECTOR	
	CN7602	QGF0503C1-20X	FFC/FPC CONNECTOR,A,B,D,F	
	CN7603	QGF0503C1-20X	FFC/FPC CONNECTOR,C,E	
	CN7604	QGF0305F1-33X	FPC CONNECTOR	
	CN7605	QGA1201F2-02X	CONNECTOR	
	OT1	LY30029-051A	SPACER(A)	

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LCD BL BOARD ASSEMBLY <03>

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PW2	YB10280A2-01	LCD BL BOARD ASSY,D,E	
		YB10280B2-01	LCD BL BOARD ASSY,F	
		YB10280C2-01	LCD BL BOARD ASSY,A,B,C	
	IC751	MIP805	IC,D,E,F	
	Q7501	2SC3647/ST/-X	POW TRANSISTOR	
	Q7502	2SC3647/ST/-X	POW TRANSISTOR	
	Q7503	DTA144EE	TRANSISTOR	
	Q7504	2SC4617/QR/-X	TRANSISTOR	
	Q7505	2SC4617/QR/-X	TRANSISTOR	
	Q7506	2SC4617/QR/-X	TRANSISTOR	
	D751	1SS376	DIODE,D,E,F	
	R751	NRSA63J-104X	MG RESISTOR,D,E,F	100kΩ,1/16W
	R7501	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
	R7502	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
	R7503	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
	R7504	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
	R7505	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
	R7506	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
	R7507	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
	R7508	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
	R7509	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
	R7510	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
	C751	NBE20JM-106X	T CAPACITOR,D,E,F	10µF,6.3V
	C752	NBE20JM-106X	T CAPACITOR,D,E,F	10µF,6.3V
	C753	NCB31HK-222X	CAPACITOR,D,E,F	0.0022µF,50V
	C754	NCB31HK-222X	CAPACITOR,D,E,F	0.0022µF,50V
	C7501	NCZ1016-150X	CAPACITOR,A,B,C,D,E	15pF
		NCZ1016-180X	CAPACITOR,F	18pF
	C7502	NCZ1016-150X	CAPACITOR,A,B,C	15pF
		NCZ1016-180X	CAPACITOR,D,E,F	18pF
	C7503	NFV41HJ-273X	MPPS CAPACITOR	0.027µF,50V
	C7504	NCB31EK-103X	CAPACITOR	0.01µF,25V
	C7505	NBE40JM-226X	T CAPACITOR	22µF,6.3V
	C7506	NCB31EK-103X	CAPACITOR	0.01µF,25V
	C7507	NDC31HJ-151X	CAPACITOR	150pF,50V
	C7508	NCB11CK-105X	CAPACITOR	1µF,16V
	C7509	NCB31CK-104X	CAPACITOR	0.1µF,16V
	C7510	NCB31HK-562X	CAPACITOR	0.0056µF,50V
	L751	NQLZ011-681X	COIL,D,E,F	680µH
	L752	NQL315K-100X	COIL,D,E,F	10µH
	L7501	NQLZ010-680X	COIL	68µH
	L7502	NQLZ010-220X	COIL	22µH
	T7501	NQS0037-001X	SW TRANSF	
	CN7501	QGF0506F2-32X	FPC CONNECTOR	
	CN7502	QGF0505F1-24X	FPC CONNECTOR	
	CN7503	QGA5002F1-02X	CONNECTOR	
	CN7504	QGF0505F2-06X	FPC CONNECTOR,D,E,F	
⚠	F751	NMFZ006-R20X-K	FUSE,D,E,F	0.2A
	OT1	LY41726-001A	PLATE(EARTH)	

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CCD BOARD ASSEMBLY <04>

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PW	YB20876A-01	CCD BOARD ASSY	
	Q5001	2SC3931/CD/-X	TRANSISTOR	
	R5001	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R5002	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R5003	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W
	R5004	NRS181J-0R0X	MG RESISTOR	0Ω,1/8W
	C5001	NCB21CK-104X	CAPACITOR	0.1µF,16V
	C5002	NBP41DM-106X	T CAPACITOR	10µF,20V
	C5003	NCB21CK-104X	CAPACITOR	0.1µF,16V
	C5004	NBE21AM-106X	T CAPACITOR	10µF,10V
	C5005	NCB11EK-104X	CAPACITOR	0.1µF,25V
	C5006	NCB21CK-104X	CAPACITOR	0.1µF,16V
	C5007	NCB21HK-222X	CAPACITOR	0.0022µF,50V
	C5011	NCB21CK-105X	CAPACITOR	1µF,16V
	L5001	NQL315K-100X	COIL	10µH
	OT1	LY30016-0U4B	SPACER-A	
	OT2	LY30016-0U4B	SPACER-A	
	L1	QQR0895-013	FERRITE CORE	

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JUNCTION BOARD ASSEMBLY <05>

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PW2	YB10278A2-01	JUNCTION BOARD ASSY	
	R517	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
	SW571	NSW0095-001X	DETECT SWITCH	
	CN571	QGF0506F3-33X	FFC/FPC CONNECTOR	
	CN572	QGF0507F1-15X	FPC CONNECTOR	
	CN573	QGF0505F2-11X	FPC CONNECTOR	
	CN574	QGF0505F2-06X	FPC CONNECTOR	

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JACK BOARD ASSEMBLY <06>

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	PW1	YB10278A1-01	JACK BOARD ASSY
	IC501	BA10358F-XE	IC
	IC502	PIC-26043T2	IR DETECT UNIT
	Q501	DTC143XE	TRANSISTOR
	Q502	RPM-22PB	PHOTO TRANSISTOR
	D501	TLSU1002/LM/-X	LE DIODE
	D502	MA8068	ZENER DIODE
	D504	MA8068	ZENER DIODE
	D505	MA8068	ZENER DIODE

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R501	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R502	NRSA63J-684X	MG RESISTOR	680kΩ,1/16W
R503	NRSA63J-182X	MG RESISTOR	1.8kΩ,1/16W
R504	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R505	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R506	NRSA63J-824X	MG RESISTOR	820kΩ,1/16W
R507	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R508	NRSA63J-683X	MG RESISTOR	68kΩ,1/16W
R509	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W
R510	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R511	NRSA63J-302X	MG RESISTOR	3kΩ,1/16W
R512	NRSA63J-391X	MG RESISTOR	390Ω,1/16W
R513	NRSA63J-470X	MG RESISTOR	47Ω,1/16W
R515	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R516	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R518	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R519	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R520	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R521	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
C501	NBE21AM-335X	T CAPACITOR	3.3µF,10V
C502	NCF31CZ-104X	CAPACITOR	0.1µF,16V
C503	NCB31EK-153X	CAPACITOR	0.015µF,25V
C504	NCB31EK-153X	CAPACITOR	0.015µF,25V
C506	NBE21AM-106X	T CAPACITOR	10µF,10V
C508	NBE20JM-226X	T CAPACITOR	22µF,6.3V
C511	NCB31HK-103X	CAPACITOR	0.01µF,50V
C512	NCB31HK-103X	CAPACITOR	0.01µF,50V
L501	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L502	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L503	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
J501	QNS0078-001	3.5 JACK	
J502	NNZ0028-001	D CONNECTOR	
J503	PEMC1032	MINI DIN CONNCTOR	
CN501	QGF0507F1-22X	FPC CONNECTOR	

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REAR BOARD ASSEMBLY <07>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
PW3	YB10278A3-01	REAR BOARD ASSY,B,E,F	
	YB10278B3-01	REAR BOARD ASSY,A,C,D	
D551	MA8068	ZENER DIODE,B,E,F	
D552	MA8068	ZENER DIODE,B,E,F	
D553	MA8068	ZENER DIODE,B,E,F	
D554	MA8068	ZENER DIODE,B,E,F	
D555	MA8068	ZENER DIODE	
D556	MA8068	ZENER DIODE	
D557	MA8068	ZENER DIODE	
R551	NRSA63J-0R0X	MG RESISTOR,B,E,F	0Ω,1/16W
R552	NRSA63J-0R0X	MG RESISTOR,B,E,F	0Ω,1/16W
R553	NQR0129-002X	FERRITE BEAD	
R554	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
R555	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R556	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
J551	LY31577-001A	BATT.TERM.UNIT	
J552	QNS0152-001	2.5 JACK,B,E,F	
J553	PEMC1203	MINI JACK	
⚠ J554	QAB0028-001	LI BATTERY	
CN551	QGA1201C1-11	CONNECTOR	

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B/W VF BOARD ASSEMBLY(100U/300U/307U/507U) <08>

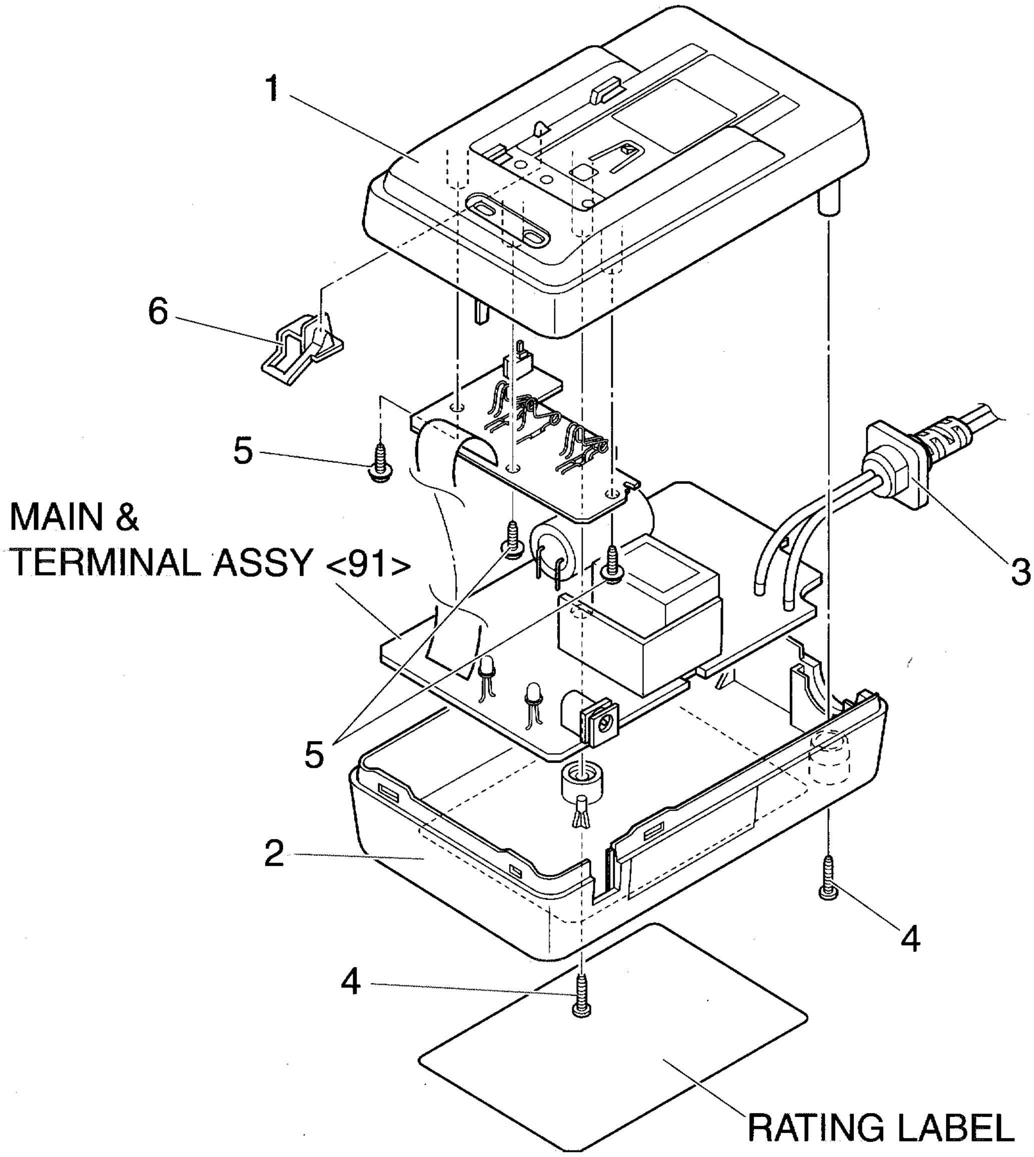
# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
PW3	YB10280A3-01	B/W VF BOARD ASSY	
Q7201	2SD2216J/QR/-X	TRANSISTOR	
D7201	MA111	DIODE	
R7201	NRVA63D-153X	CMF RESISTOR	15kΩ,1/16W
R7202	NRVA63D-103X	CMF RESISTOR	10kΩ,1/16W
R7203	NRVA63D-680X	CMF RESISTOR	68Ω,1/16W
R7204	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
C7201	NCB31EK-103X	CAPACITOR	0.01µF,25V
CN7201	QGF0503C1-20X	FFC/FPC CONNECTOR	
CN7202	QGF0503C1-20X	FFC/FPC CONNECTOR	
CN7203	QGA1201C2-02X	CONNECTOR	

SECTION 6
AC POWER ADAPTER (AA-V40U)

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

6.1 CABINET ASSEMBLY <MA>



#⚠REF No. PART No. PART NAME, DESCRIPTION

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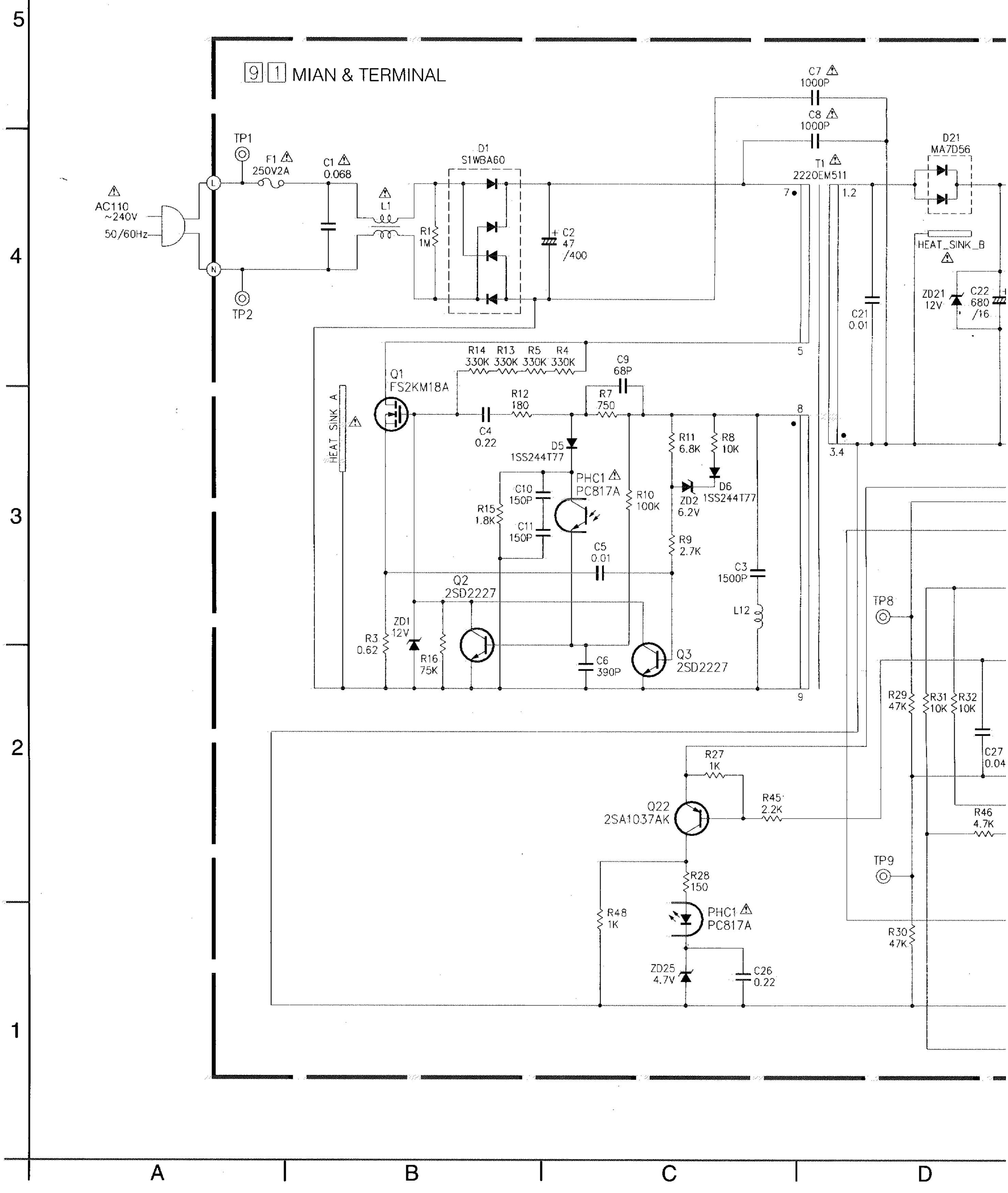
CABINET ASSEMBLY <MA>

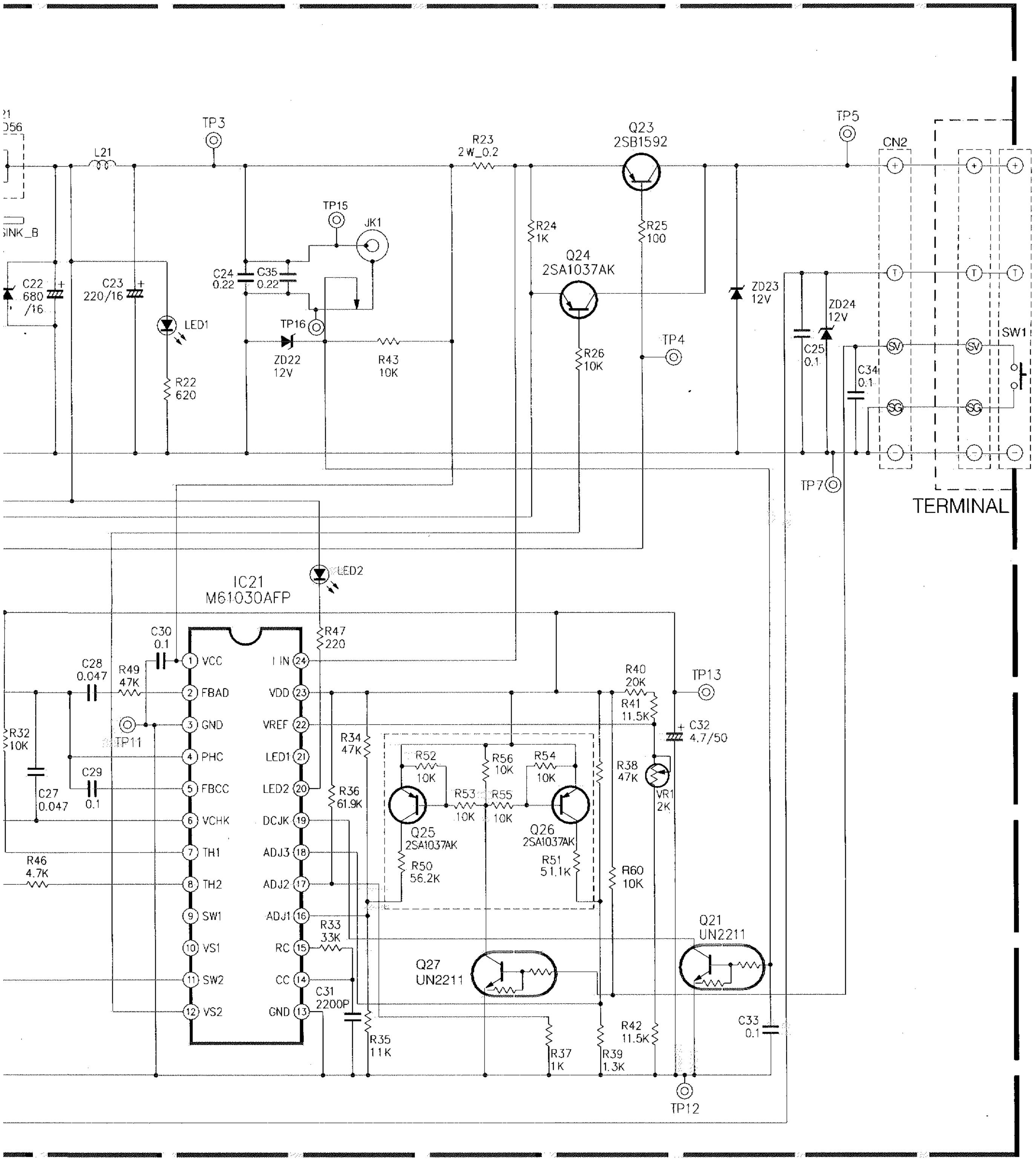
#⚠REF No.	PART No.	PART NAME, DESCRIPTION
⚠ 1	PTY20591-012	UPPER CASE ASSY
⚠ 2	PTY20483-021	LOWER CASE
⚠ 3	PTY20290-040	POWER CORD
4	YQ10531-011	SCREW,x2
5	PTY20545-055	SCREW,x3
6	PTY20591-053	SWITCH COVER

6.2 SCHEMATIC DIAGRAM

NOTE: *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*


9 1 MIAN & TERMINAL
AC110 ~240V 50/60Hz
TP1
TP2
F1 250V2A
C1 0.068
L1
R1 1M
D1 S1WBA60
C2 47 /400
C7 1000P
C8 1000P
T1 2220EM511
7
5
8
9
1.2
3.4
C21 0.01
D21 MA7D56
HEAT_SINK_B
ZD21 12V
C22 680 /16
HEAT_SINK_A
Q1 FS2KM18A
R14 330K
R13 330K
R5 330K
R4 330K
C9 68P
R12 180
R7 750
C4 0.22
D5 1SS244T77
R11 6.8K
R8 10K
D6 1SS244T77
ZD2 6.2V
PHC1 PC817A
C10 150P
C11 150P
R15 1.8K
R10 100K
R9 2.7K
C5 0.01
C3 1500P
L12
Q2 2SD2227
ZD1 12V
R3 0.62
R16 75K
C6 390P
Q3 2SD2227
TP8
R29 47K
R31 10K
R32 10K
C27 0.04
R27 1K
R45 2.2K
Q22 2SA1037AK
R46 4.7K
R28 150
TP9
R48 1K
PHC1 PC817A
R30 47K
ZD25 4.7V
C26 0.22
5
4
3
2
1
A
B
C
D

Safety precautions
The components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.


TP3
L21
TP5
R23
2W_0.2
Q23
2SB1592
CN2
TP15
JK1
R24
1K
R25
100
Q24
2SA1037AK
C22
680
/16
C23
220/16
C24
0.22
C35
0.22
ZD23
12V
ZD24
12V
LED1
TP16
ZD22
12V
R43
10K
R26
10K
TP4
C25
0.1
C34
0.1
SW1
R22
620
TP7
TERMINAL
LED2
IC21
M61030AFP
C30
0.1
R47
220
C28
0.047
R49
47K
1 VCC
2 FBAD
3 GND
4 PHC
5 FBCC
6 VCHK
7 TH1
8 TH2
9 SW1
10 VS1
11 SW2
12 VS2
24 I IN
23 VDD
22 VREF
21 LED1
20 LED2
19 DCJK
18 ADJ3
17 ADJ2
16 ADJ1
15 RC
14 CC
13 GND
TP11
R32
10K
C27
0.047
C29
0.1
R46
4.7K
R40
20K
R41
11.5K
TP13
C32
4.7/50
R34
47K
R52
10K
R56
10K
R54
10K
R53
10K
R55
10K
R38
47K
VR1
2K
R36
61.9K
Q25
2SA1037AK
Q26
2SA1037AK
R50
56.2K
R51
51.1K
R60
10K
R33
33K
Q21
UN2211
Q27
UN2211
C31
2200P
C33
0.1
R35
11K
R37
1K
R39
1.3K
R42
11.5K
TP12

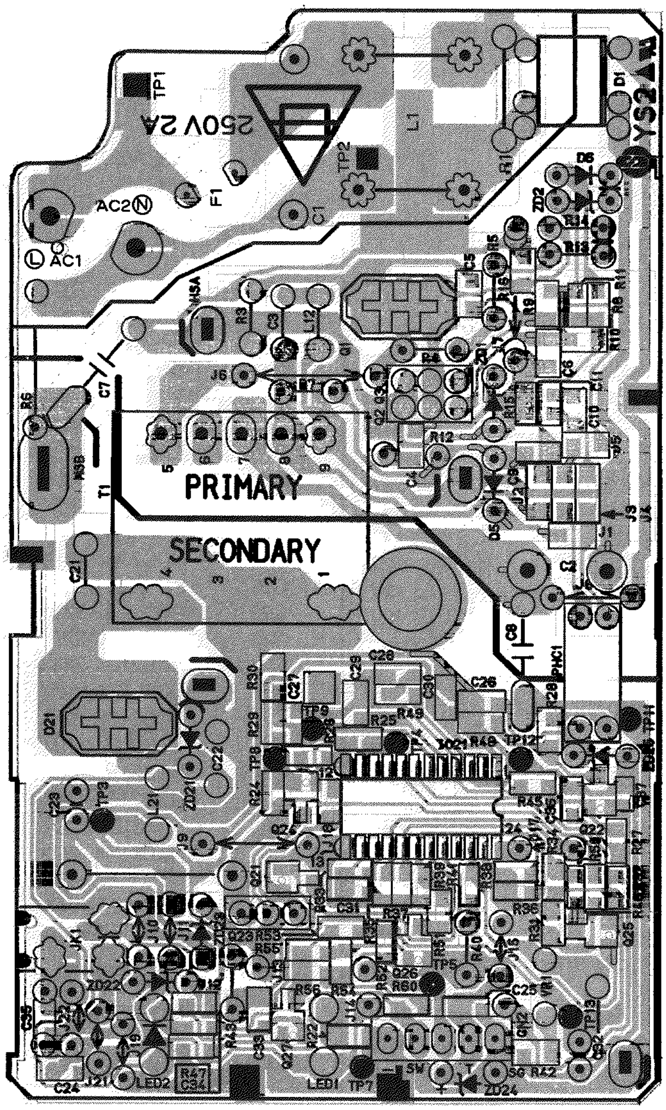
E	F	G

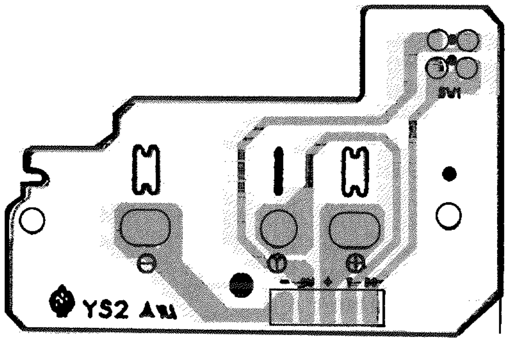
6.3 CIRCUIT BOARD

2A 250V

CAUTION:
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE.

ATTENTION:
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE D'INCENDE, REMPLACER LE FUSIBLE PAR UN AUTRE DE MEME TYPE ET DE MEME TENSION.


TP1
250V 2A
L1
TP2
F1
C1
D1
YS2
AC2 Ⓝ
Ⓛ AC1
C7
R6
T1
PRIMARY
SECONDARY
D21
C21
C2
PHC1
IC1
LED1
LED2
SW
ZD24



6.4 ELECTRICAL PARTS LIST

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MAIN & TERMINAL BOARD ASSY <91>

# !	REF No.	PART No.	PART NAME, DESCRIPTION	
!	PW1	PTY20591-502	MAIN & TERMINAL BOARD ASSY	
!	HS1	PTY20483-071	HEAT SINK A	
!	HS2	PTY20591-072	HEAT SINK B	
	IC21	M61030AFP	CHARGE COTROL IC 24pin SOP	
	Q1	FS2KM18A	MOS FET	
	Q2	2SD2227	TRANSISTER	
	Q3	2SD2227	TRANSISTER	
	Q21	UN2211TX	DIG.TRANSISTER	
	Q22	2SA1037AK/QR/-X	CHIP TRANSISTER	
	Q23	2SB1592	TRANSISTER	
	Q24	2SA1037AK/QR/-X	TRANSISTER	
	Q25	2SA1037AK/QR/-X	TRANSISTER	
	Q26	2SA1037AK/QR/-X	TRANSISTER	
	Q27	UN2211TX	DIG TRANSISTOR	
	D1	S1WBA60	B.DIODE	600V 1A
	D5	1SS244T77	DIODE	200V 6A
	D6	1SS244T77	DIODE	200V 6A
	D21	MA7D56	DIODE	60V 10A
	ZD1	MTZJ12C-T2	ZENER DIODE	12V
	ZD2	MTZJ6.2B-T2	ZENER DIODE	6.2V 500mW
	ZD21	MTZJ12C-T2	ZENER DIODE	12V
	ZD22	MTZJ12C-T2	ZENER DIODE	12V
	ZD23	MTZJ12C-T2	ZENER DIODE	12V
	ZD24	MTZJ12C-T2	ZENER DIODE	12V
	ZD25	MA4047NM	ZENER DIODE	4.7V 500mW
	LED1	YQ10531-540	LED RED POWER	
	LED2	YQ10531-542	LED GREEN CHARGE	
	R1	QRN141J-105	RESISTOR	1MΩ 1/4W
	R3	PTY10067-601	MF RESISTOR	0.62Ω 1W
	R4	QRE141J-334Y	RESISTOR	330kΩ 1/4W
	R5	QRE141J-334Y	RESISTOR	330kΩ 1/4W
	R7	QRE141J-751Y	RESISTOR	750Ω 1/4W
	R8	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W
	R9	NRSA02J-272X	MG RESISTOR	2.7kΩ 1/10W
	R10	NRSA02J-104X	MG RESISTOR	100kΩ 1/10W
	R11	NRSA02J-682X	MG RESISTOR	6.8kΩ 1/10W
	R12	QRE141J-181Y	RESISTOR	180Ω 1/4W
	R13	QRE141J-334Y	RESISTOR	330kΩ 1/4W
	R14	QRE141J-334Y	RESISTOR	330kΩ 1/4W
	R15	NRSA02J-182X	MG RESISTOR	1.8kΩ 1/10W
	R16	NRSA02J-753X	MG RESISTOR	75kΩ 1/10W
	R22	NRSA02J-621X	MG RESISTOR	620Ω 1/10W
	R23	PTY20539-605	MF RESISTOR	0.20Ω 2W
	R24	NRSA02J-102X	MG RESISTOR	1kΩ 1/10W
	R25	NRSA02J-101X	MG RESISTOR	100Ω 1/10W
	R26	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W
	R27	NRSA02J-102X	MG RESISTOR	1kΩ 1/10W
	R28	NRSA02J-151X	MG RESISTOR	150Ω 1/10W
	R29	PTY20539-601	MG RESISTOR	47.0kΩ 1/10W
	R30	PTY20539-601	MG RESISTOR	47.0kΩ 1/10W
	R31	NRSA02F-103X	MG RESISTOR	10.0kΩ 1/10W
	R32	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W
	R33	NRSA02J-333X	MG RESISTOR	33kΩ 1/10W
	R34	PTY20539-601	MG RESISTOR	47.0kΩ 1/10W
	R35	PTY20539-602	MG RESISTOR	11.0kΩ 1/10W
	R36	NRSA02F-6192X	MG RESISTOR	61.9kΩ 1/10W
	R37	PTY20539-603	MG RESISTOR	1.0kΩ 1/10W
	R38	PTY20539-601	MG RESISTOR	47.0kΩ 1/10W
	R39	PTY20539-604	MG RESISTOR	1.3kΩ 1/10W
	R40	PTY20450-200	MG RESISTOR	20.0kΩ 1/4W
	R41	NRSA02F-1152X	MG RESISTOR	11.5kΩ 1/10W
	R42	NRSA02F-1152X	MG RESISTOR	11.5kΩ 1/10W
	R43	QRE141J-103Y	MF RESISTOR	10kΩ 1/4W
	R45	NRSA02J-222X	MG RESISTOR	2.2kΩ 1/10W
	R46	NRSA02J-472X	MG RESISTOR	4.7kΩ 1/10W
	R47	NRSA02J-221X	MG RESISTOR	220Ω 1/10W
	R48	NRSA02J-102X	MG RESISTOR	1kΩ 1/10W
	R49	NRSA02J-473X	MG RESISTOR	47kΩ 1/10W
	R50	NRSA02F-5622X	MG RESISTOR	56.2kΩ 1/10W
	R51	NRSA02F-5112X	MG RESISTOR	51.1kΩ 1/10W
	R52	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W
	R53	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W
	R54	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W
	R55	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W
	R56	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W
	R60	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W
!	C1	PTY20292-303	CAPACITOR	0.068μ F 275V
	C2	YQ10626-402	E CAPACITOR	47μ F 400V
	C3	PTY10067-651	CAPACITOR	1500pF 250V
	C4	NCB21CK-224X	CAPACITOR	0.22μ F 16V
	C5	PTY10067-653	CAPACITOR	0.01μ F 50V
	C6	NCB21HK-391X	CAPACITOR	390pF 50V
!	C7	PTY20292-368	CAPACITOR	1000pF 250V
!	C8	PTY20292-368	CAPACITOR	1000pF 250V
	C9	NDC21HJ-680X	CAPACITOR	68pF 50V
	C10	NDC21HJ-151X	CAPACITOR	150pF 50V
	C11	NDC21HJ-151X	CAPACITOR	150pF 50V
	C21	PTY10067-657	CAPACITOR	0.01μ F 250V
	C22	PTY20292-321	E CAPACITOR	680μ F 16V
	C23	QETL1CM-227	E CAPACITOR	220μ F 16V
	C24	NCB21CK-224X	CAPACITOR	0.22μ F 16V
	C25	NCF21EZ-104X	CAPACITOR	0.1μ F 25V
	C26	NCB21CK-224X	CAPACITOR	0.22μ F 16V
	C27	NCB21EK-473X	CAPACITOR	0.047μ F 25V
	C28	NCB21HK-473X	CAPACITOR	0.047μ F 50V
	C29	NCB21EK-104X	CAPACITOR	0.1μ F 25V
	C30	NCF21EZ-104X	CAPACITOR	0.1μ F 25V
	C31	NCB21HK-222X	CAPACITOR	0.0022μ F 50V
	C32	QEHA1HM-475	E CAPACITOR	4.7μ F 50V
	C33	NCF21EZ-104X	CAPACITOR	0.1μ F 25V
	C34	NCF21EZ-104X	CAPACITOR	0.1μ F 25V
	C35	QFLA1HJ-224	F CAPACITOR	0.22μ F 50V
!	T1	PTY20538-801	SW TRANS	
	VR1	PTY20483-101	VOLUME	2kΩ
!	F1	PTY20450-040	FUSE	2A 250V
	JK1	YQ21032-301	DC JACK	
!	L1	PTY10067-701	LINE FILTER	
	L12	PTY10067-702	BEAD INDUCTOR	
	L21	PTY10067-703	COIL	
!	PHC1	PC817A	PHOTOCOUPLER	
		or PC817X1	PHOTOCOUPLER	
	SW1	PTY20545-662	SWITCH	
	WR1	PTY20591-052	FLAT CABLE (5P)	
	TB1	PTY20545-051	TERMINAL,x5 (CN2)	
	OT1	PTY10067-551	SCREW	
	OT2	PTY20591-054	INSULATION TUBE1	
	OT3	PTY20591-055	INSULATION TUBE2	

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Printed in Japan